

US Trends in Refractive Surgery: The 2008 ISRS/AAO Survey

Richard J. Duffey, MD **

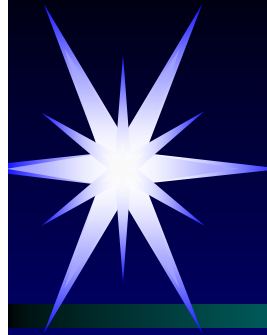
David Leaming, MD

Refractive Subspecialty Day

Atlanta - November 8, 2008

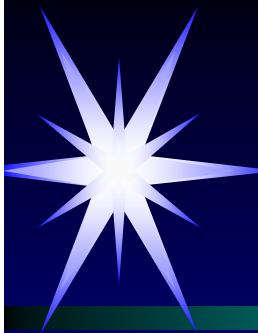
** TLCV provided partial funding for this survey



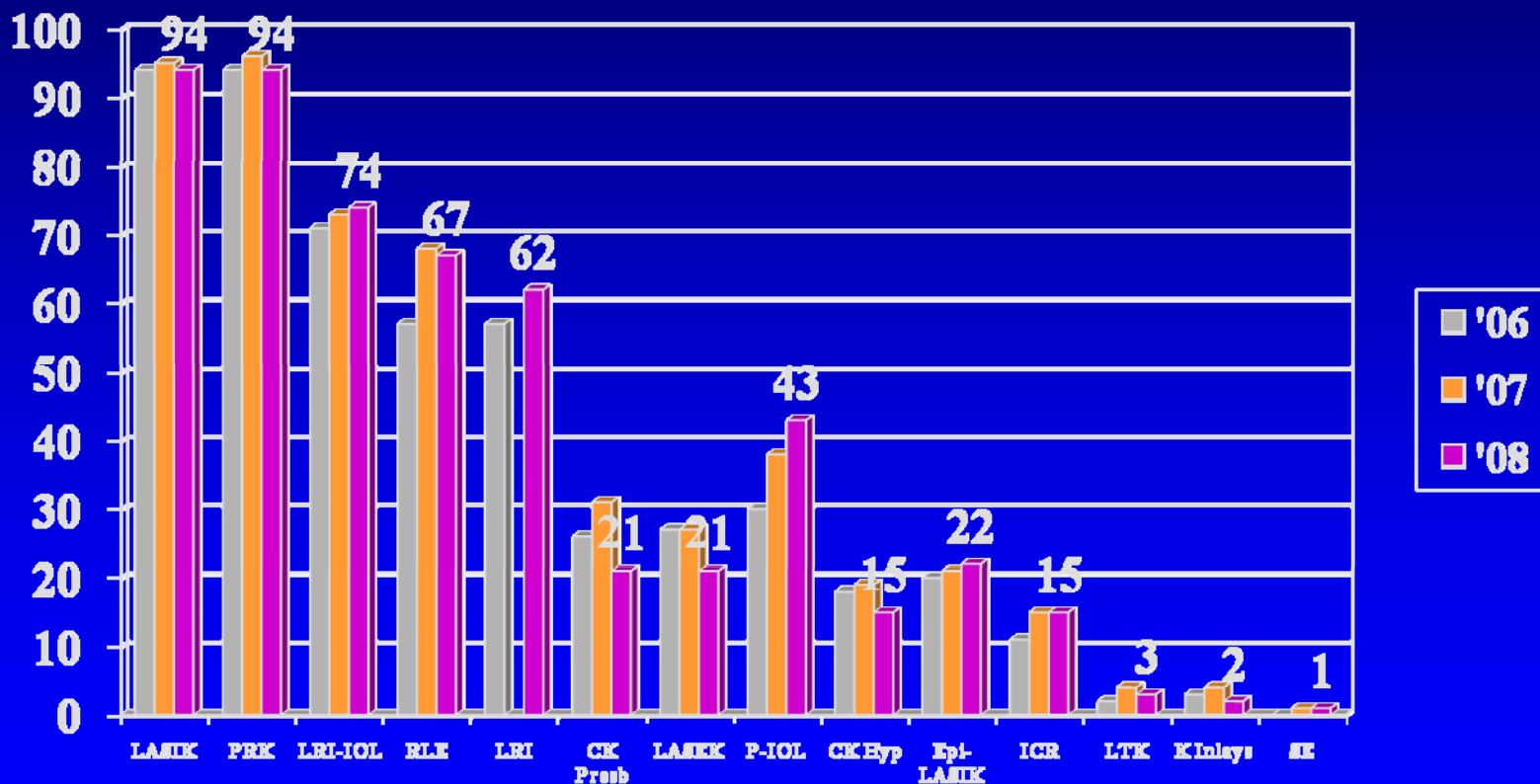


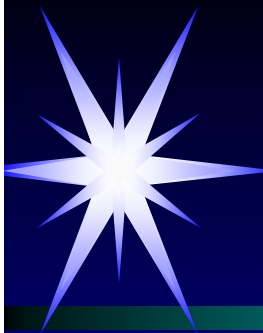
2008 Survey

- August mailing to 1364 U.S. members of ISRS/AAO.
- 223 responses analyzed by October 1st for 16% of the U.S. ISRS/AAO membership.
- Twelfth year of refractive data collection.
- Alphabet soup of refractive surgery including corneal and lens based surgeries.

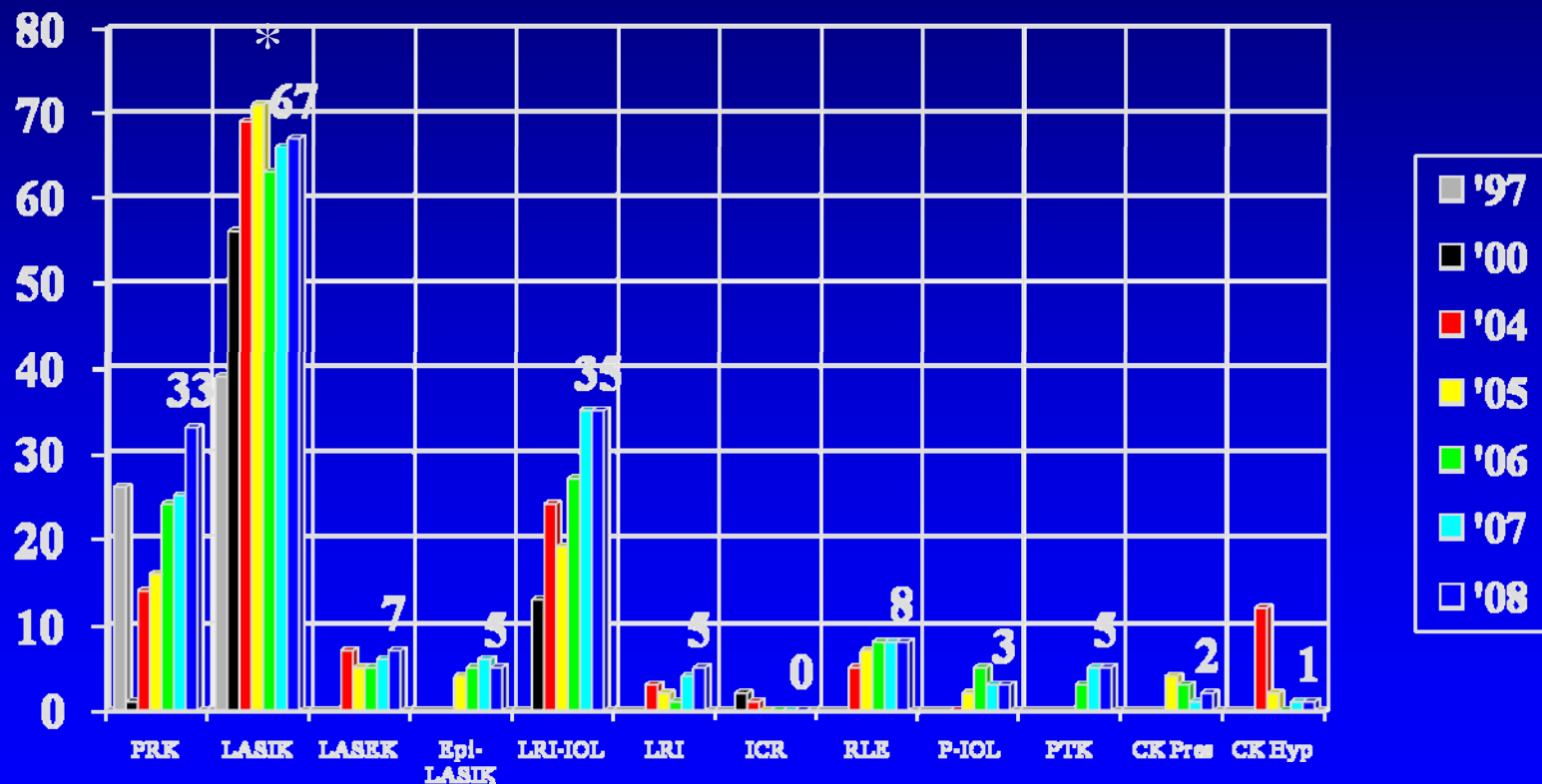


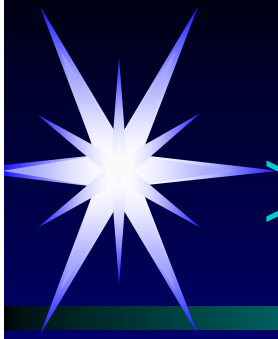
I Am Currently Doing This Surgery



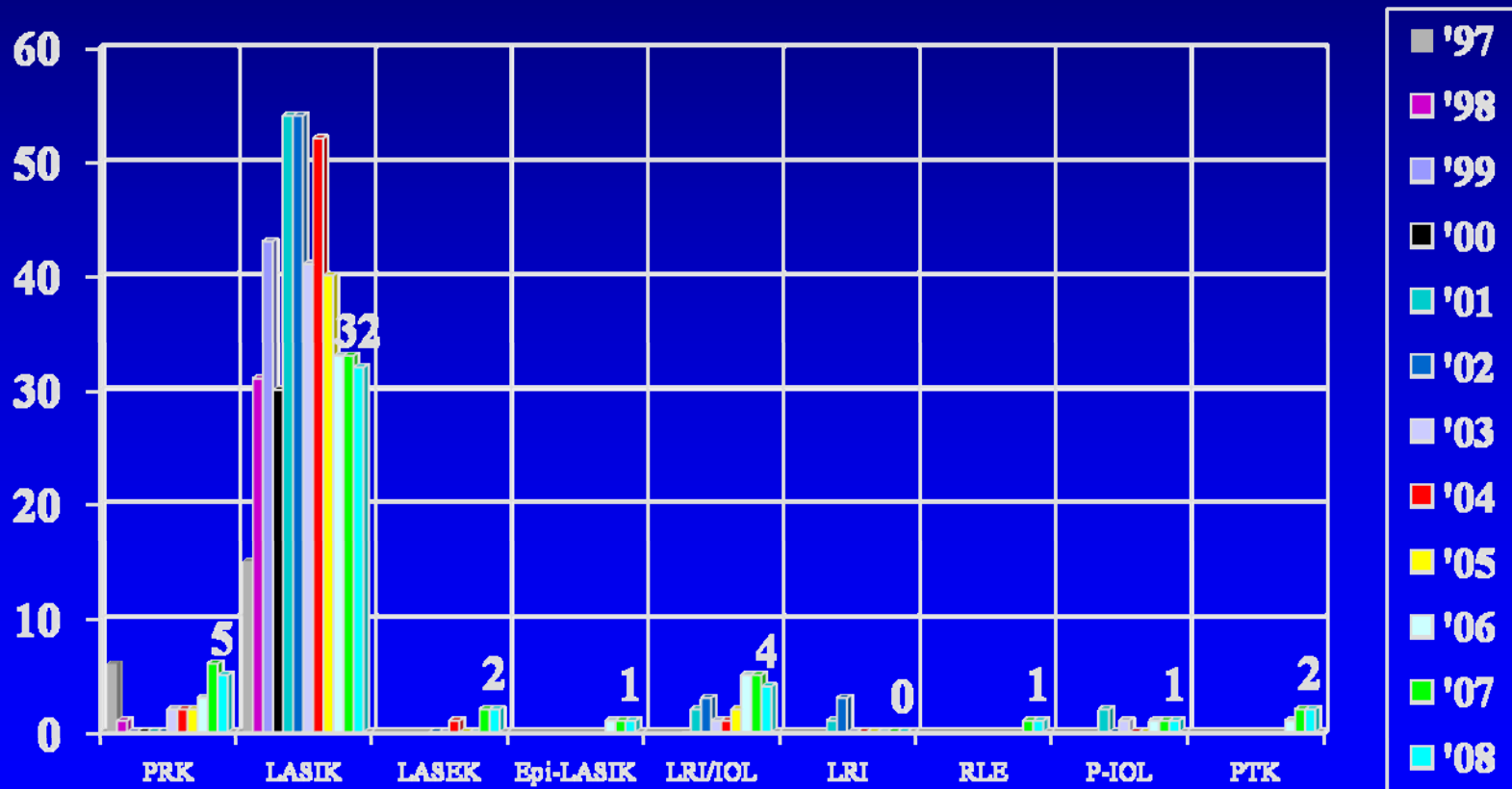


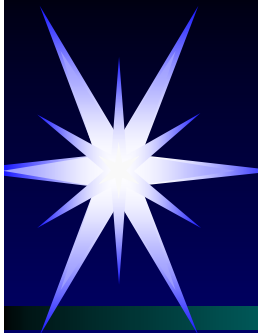
> 5 Cases / Month



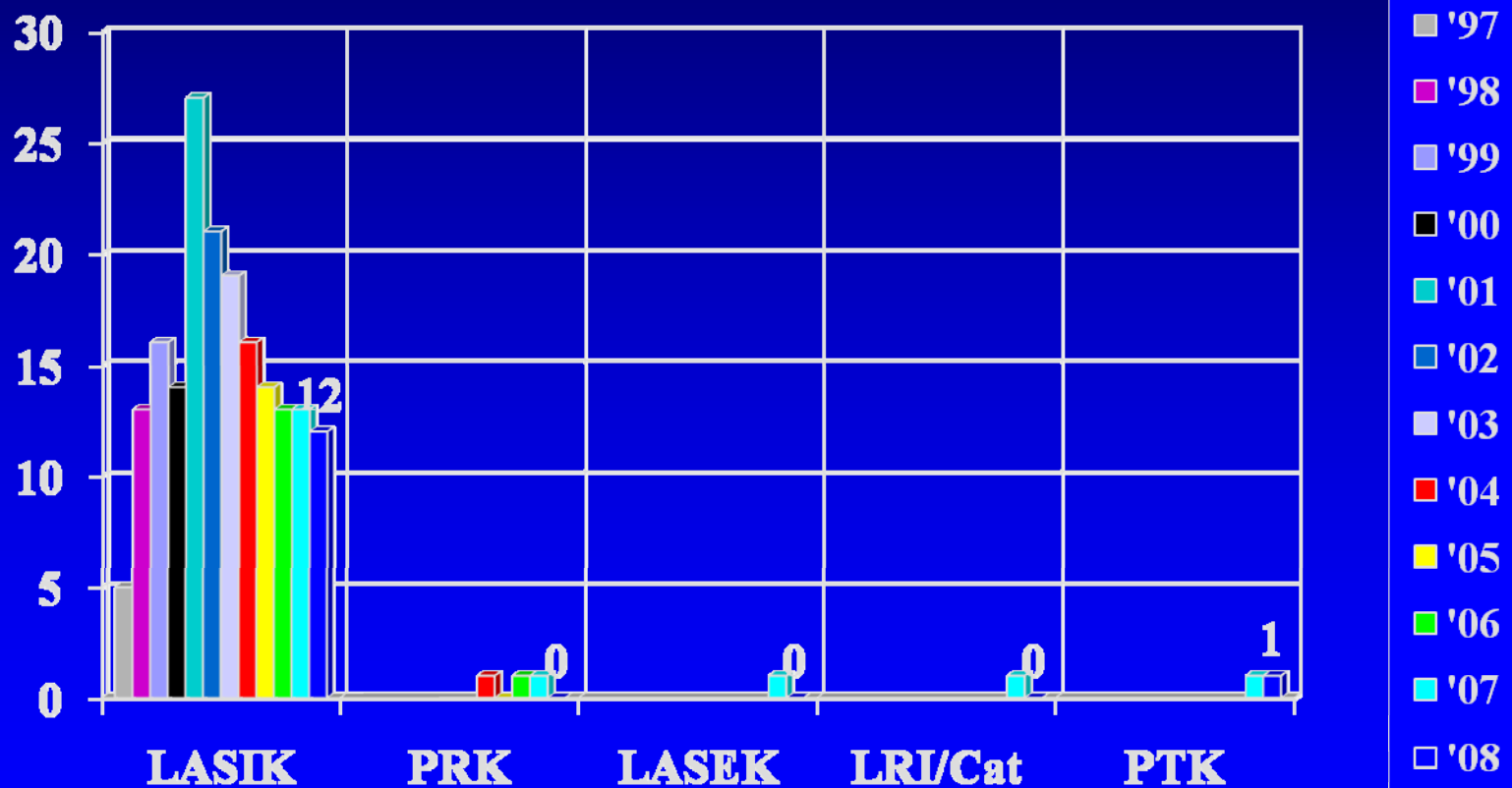


> 25 Cases / Month



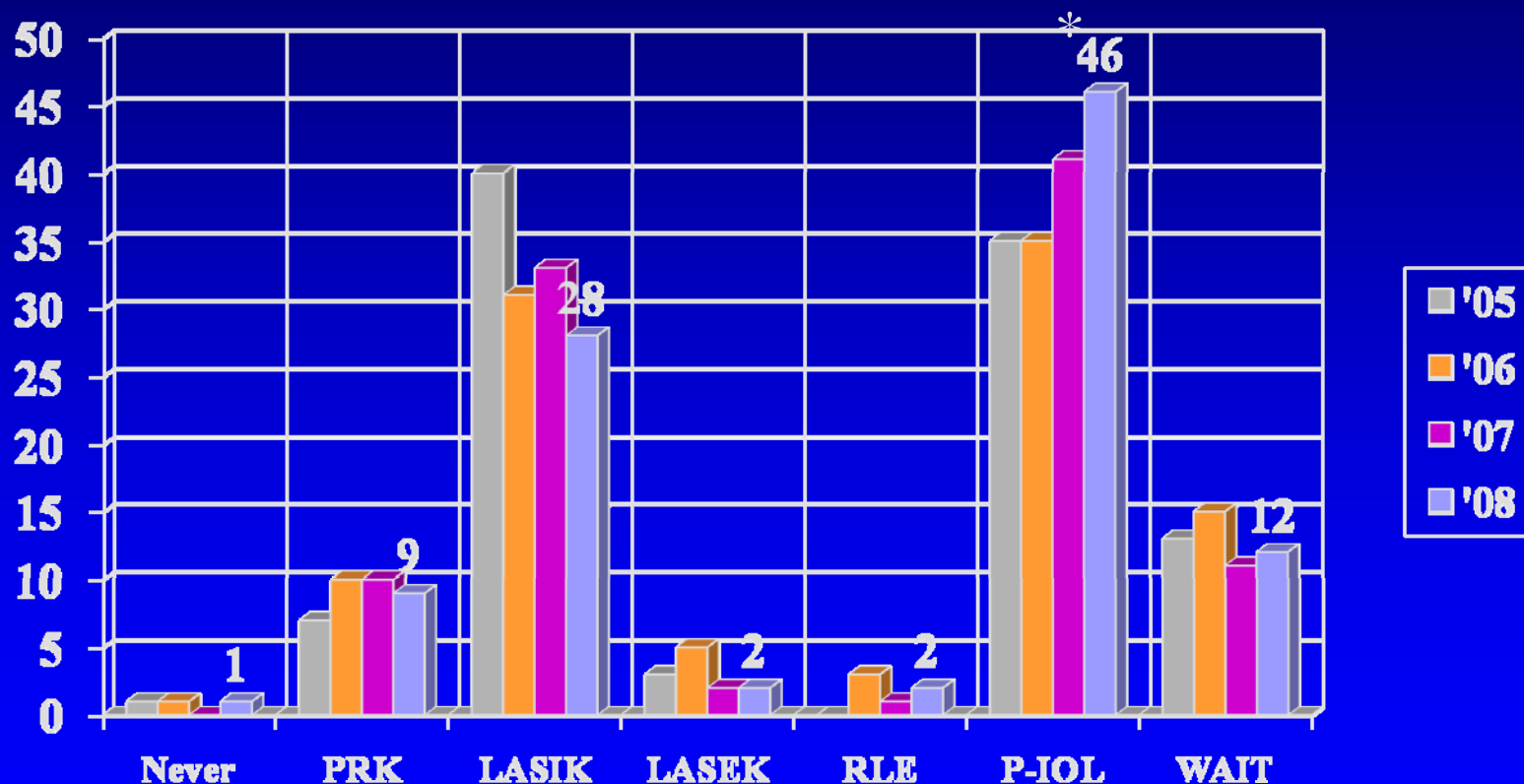


> 75 Cases / Month



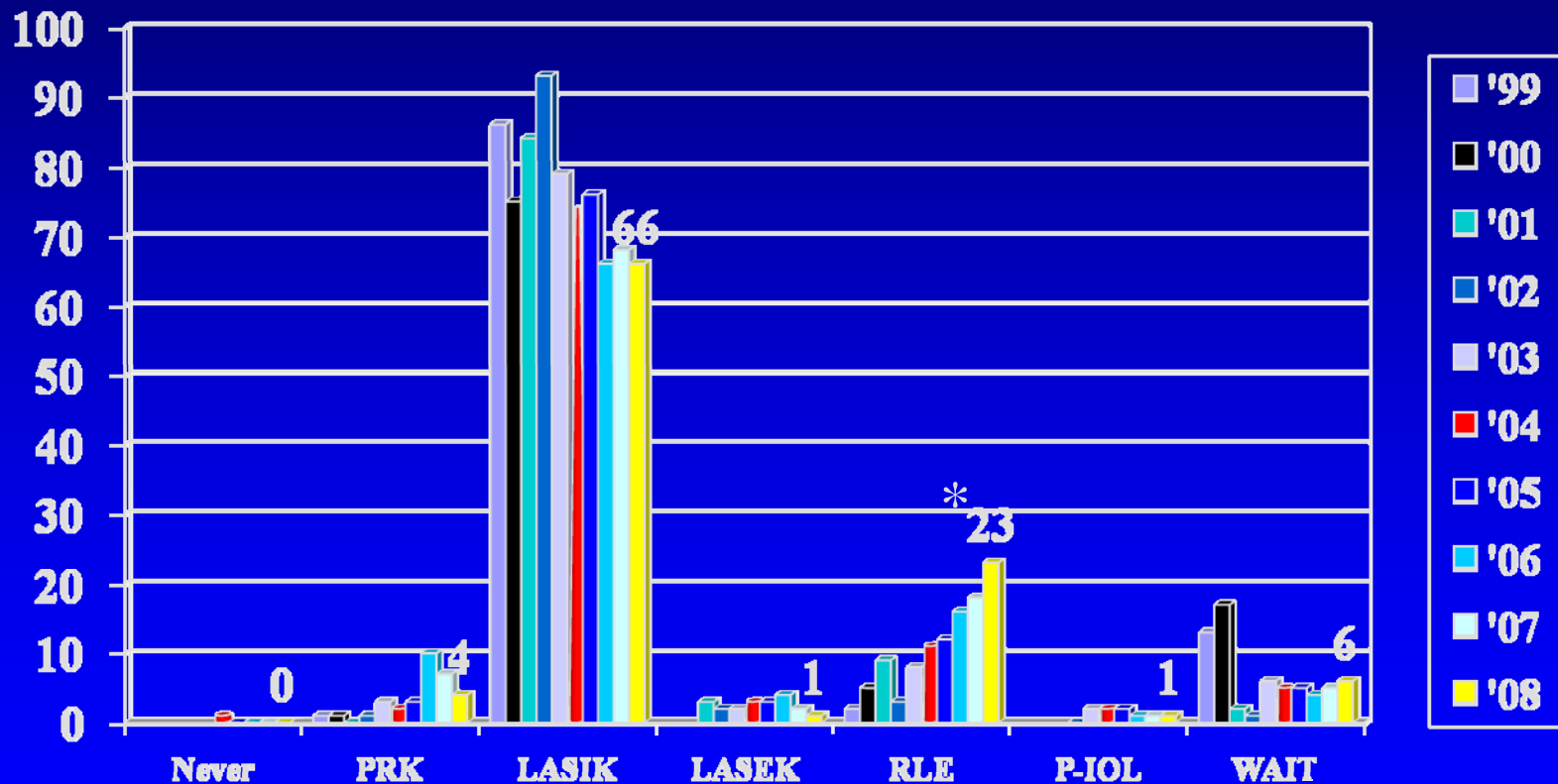


Preferred Surgery For 30 yo -10.00 Diopter Myope



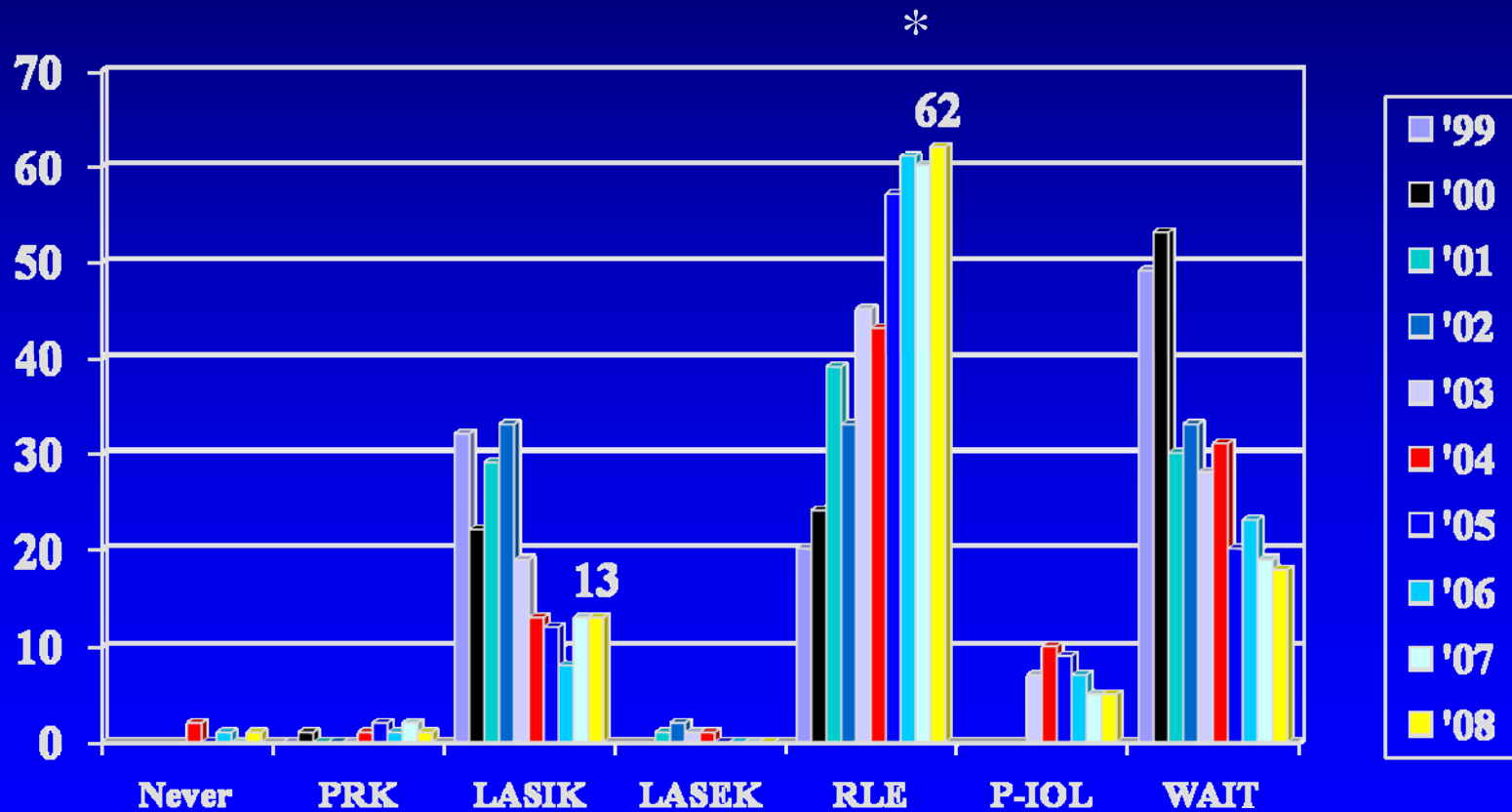


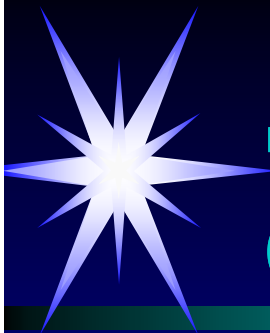
Preferred Surgery For 45 yo +3.00 D Hyperope



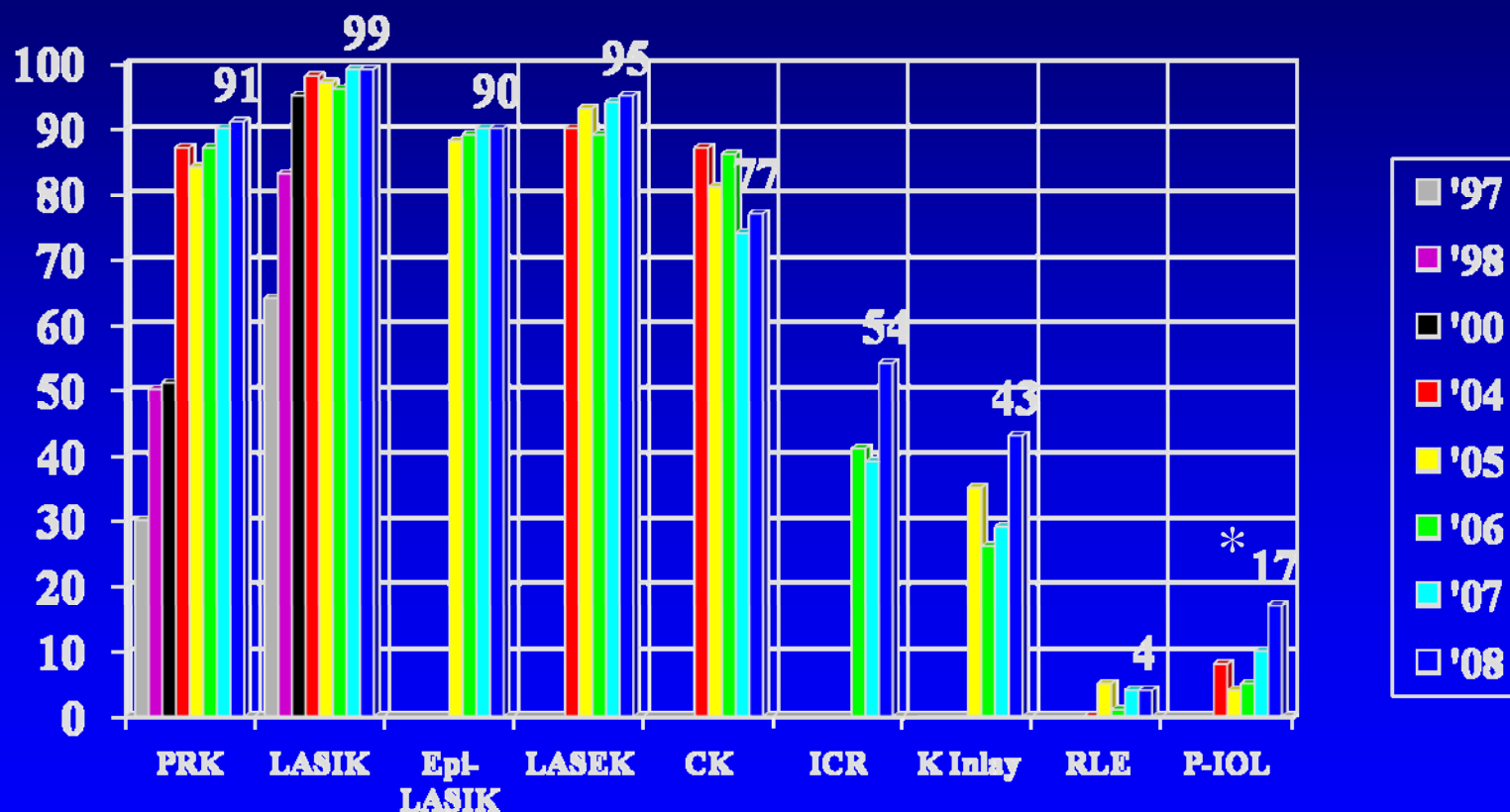


Preferred Surgery For 45 yo +5.00 D Hyperope



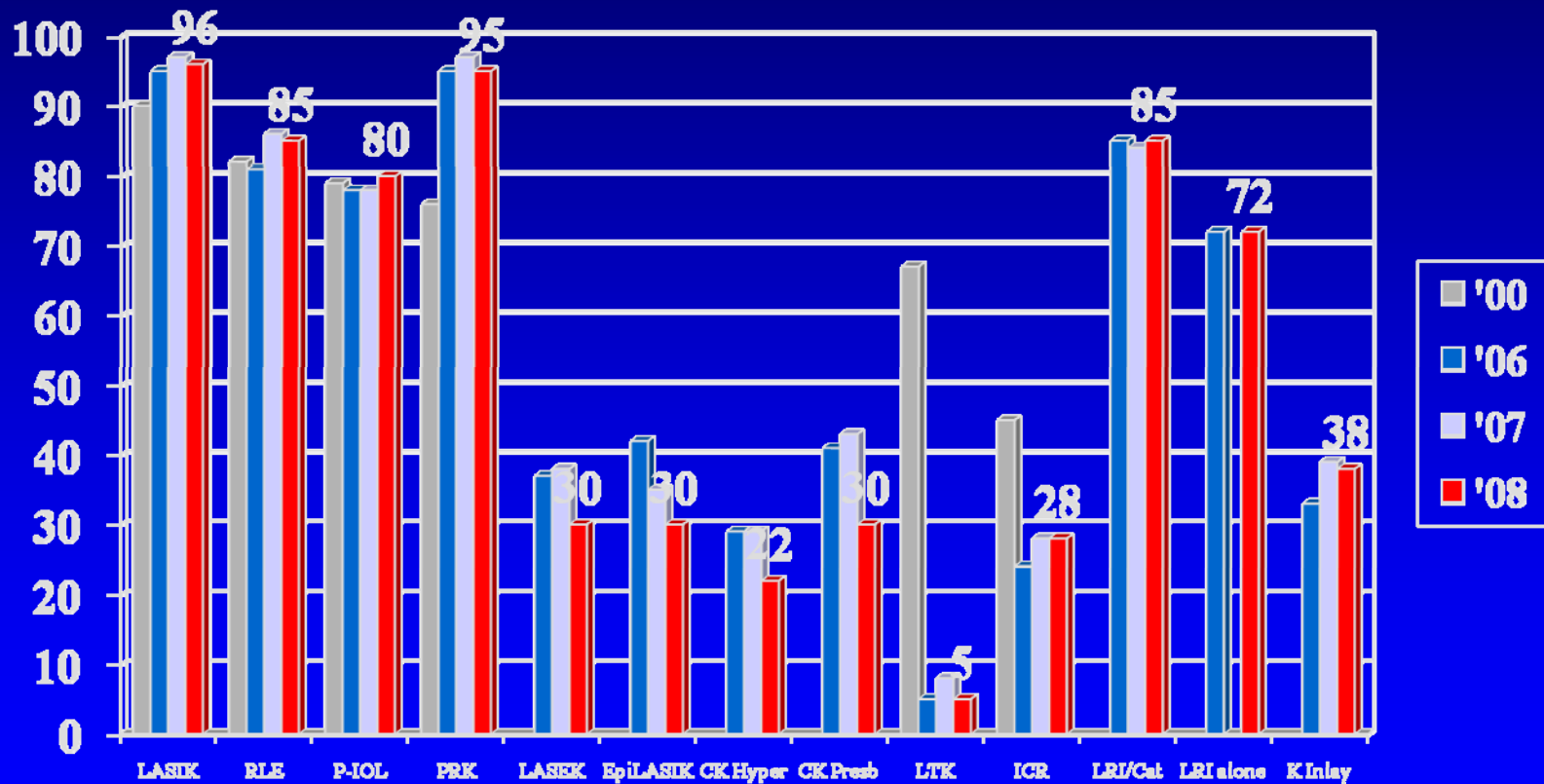


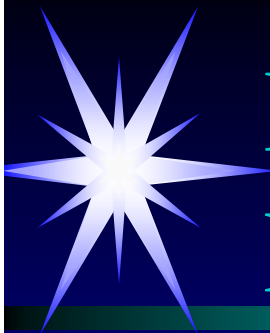
Surgery Done Bilateral At Same O.R. Visit



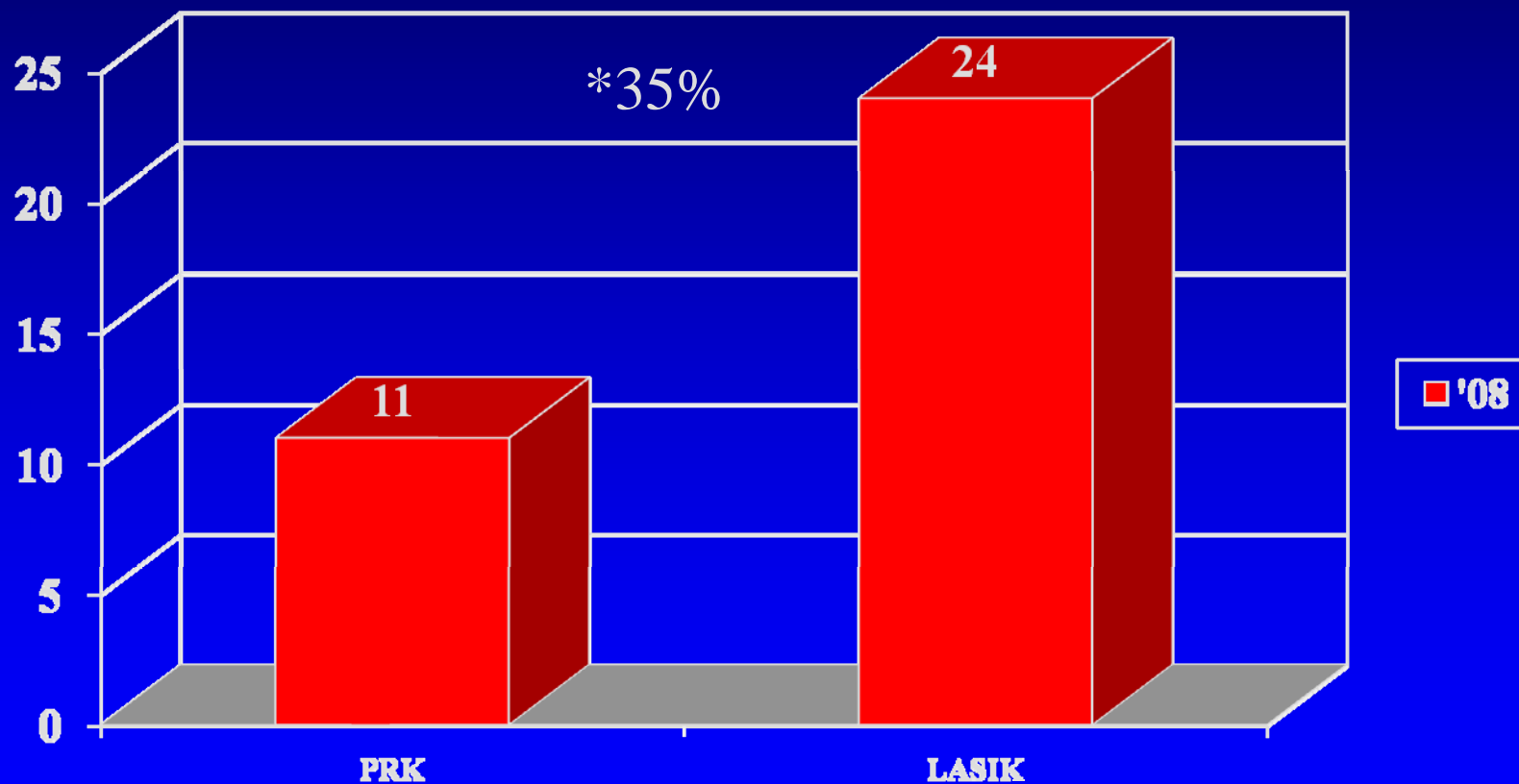


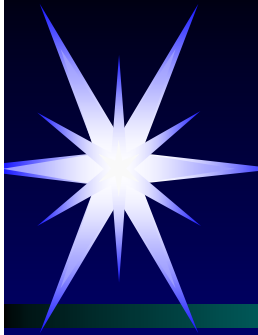
Procedure Future Index (Doing Now and/or Plan in Future)



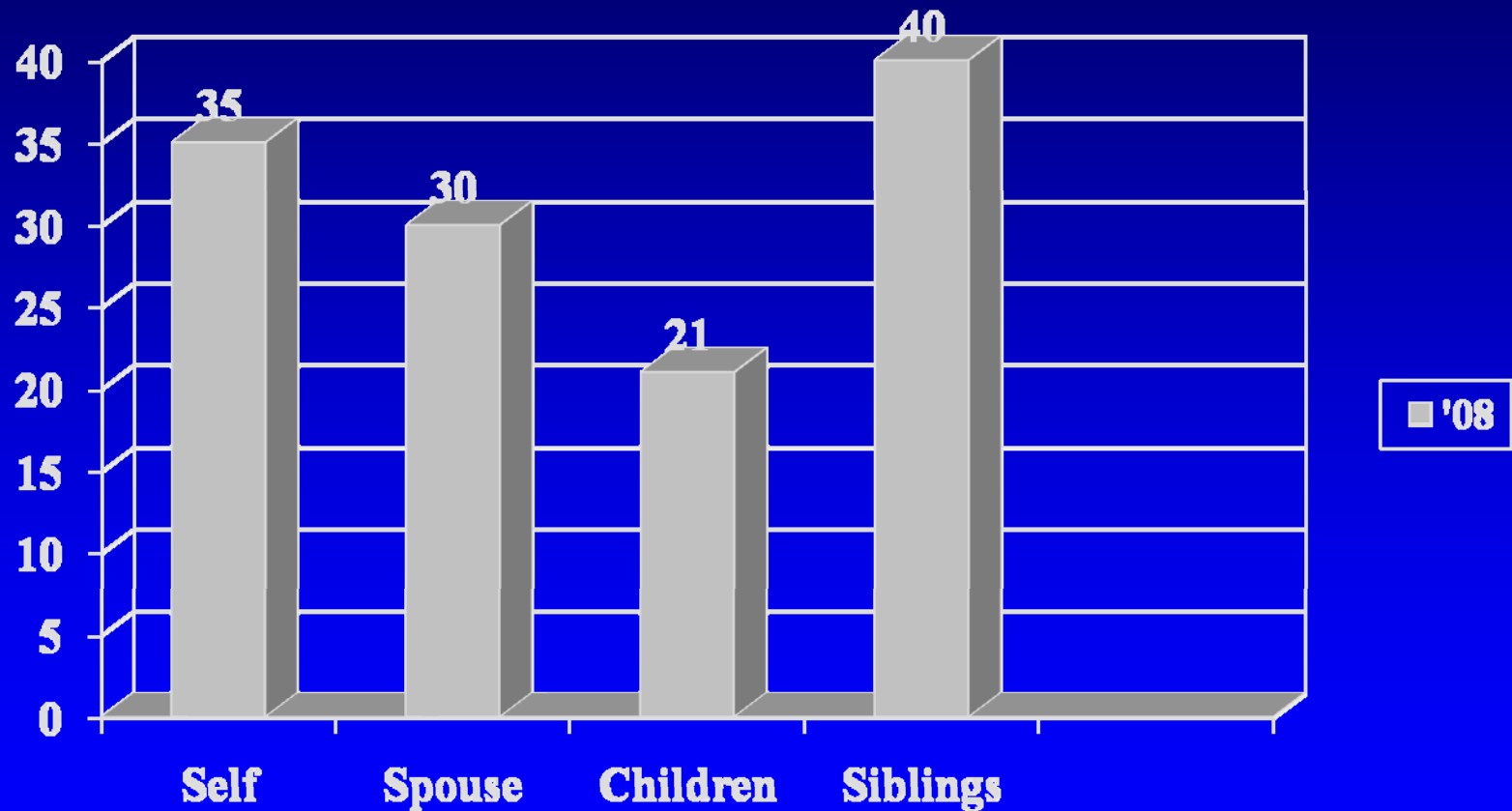


Had Refractive Surgery Performed on Yourself



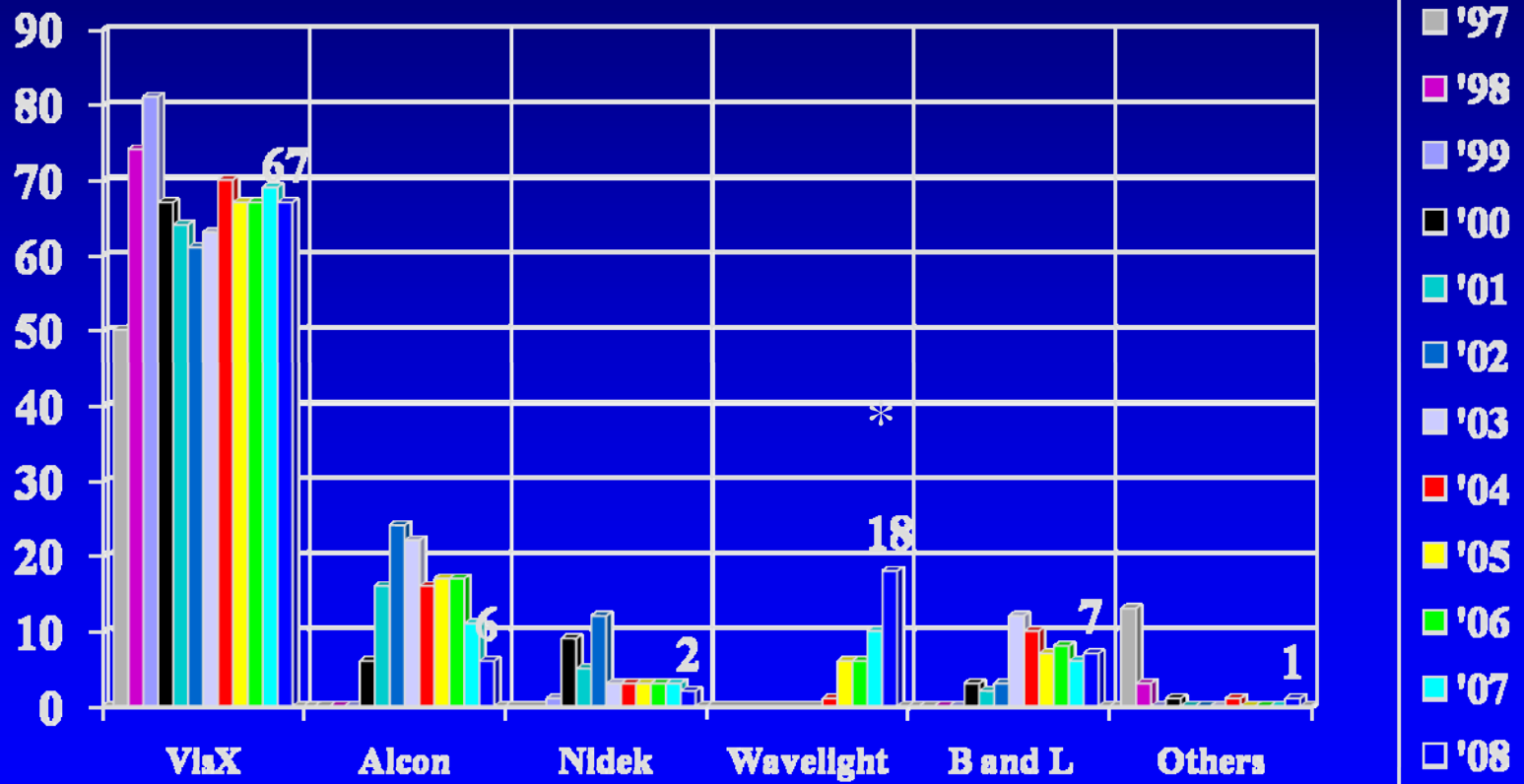


Family LVC Index: (LASIK or PRK Performed on Our Own Family Members)



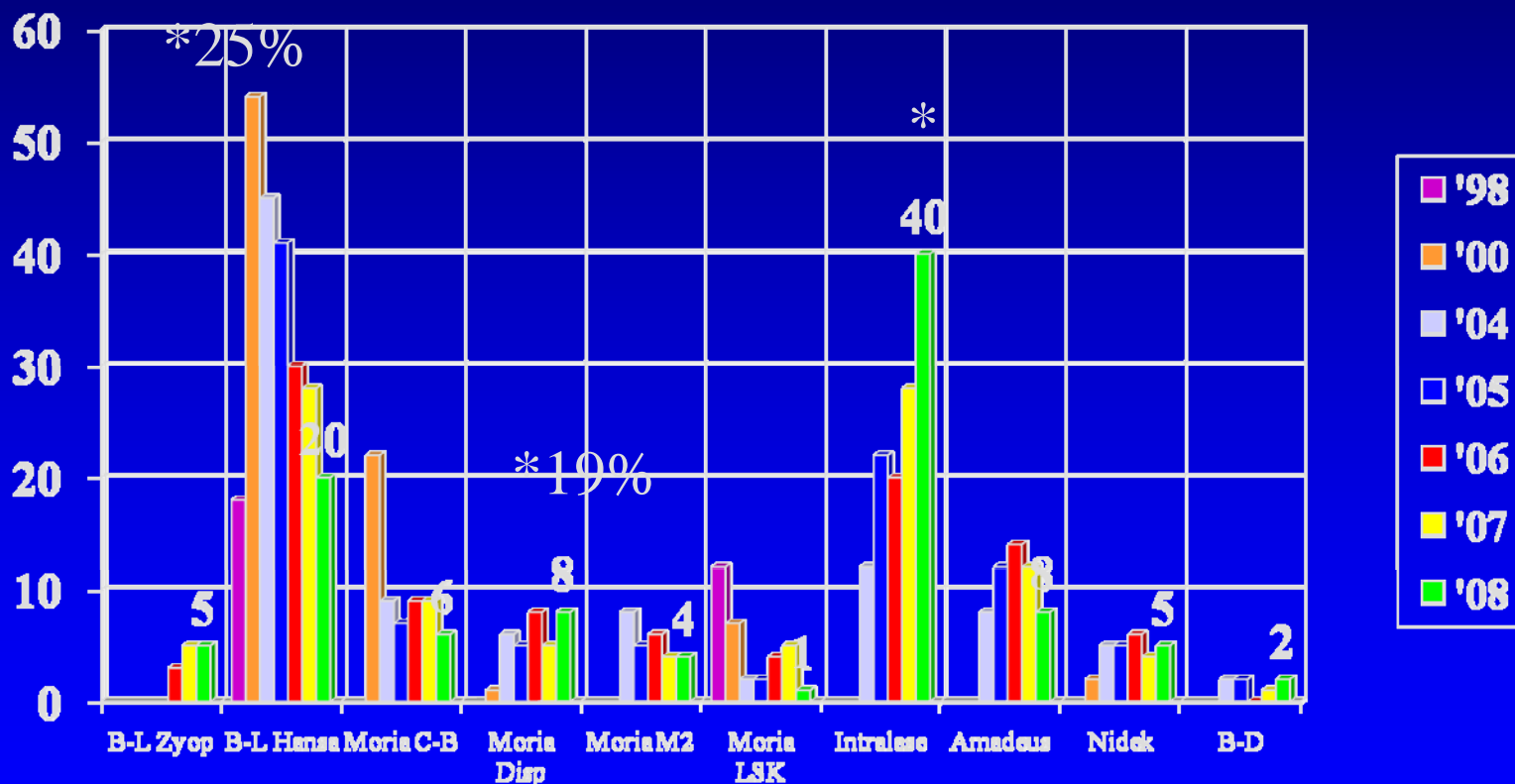


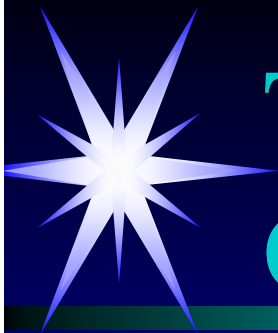
Excimer Laser Most Commonly Used



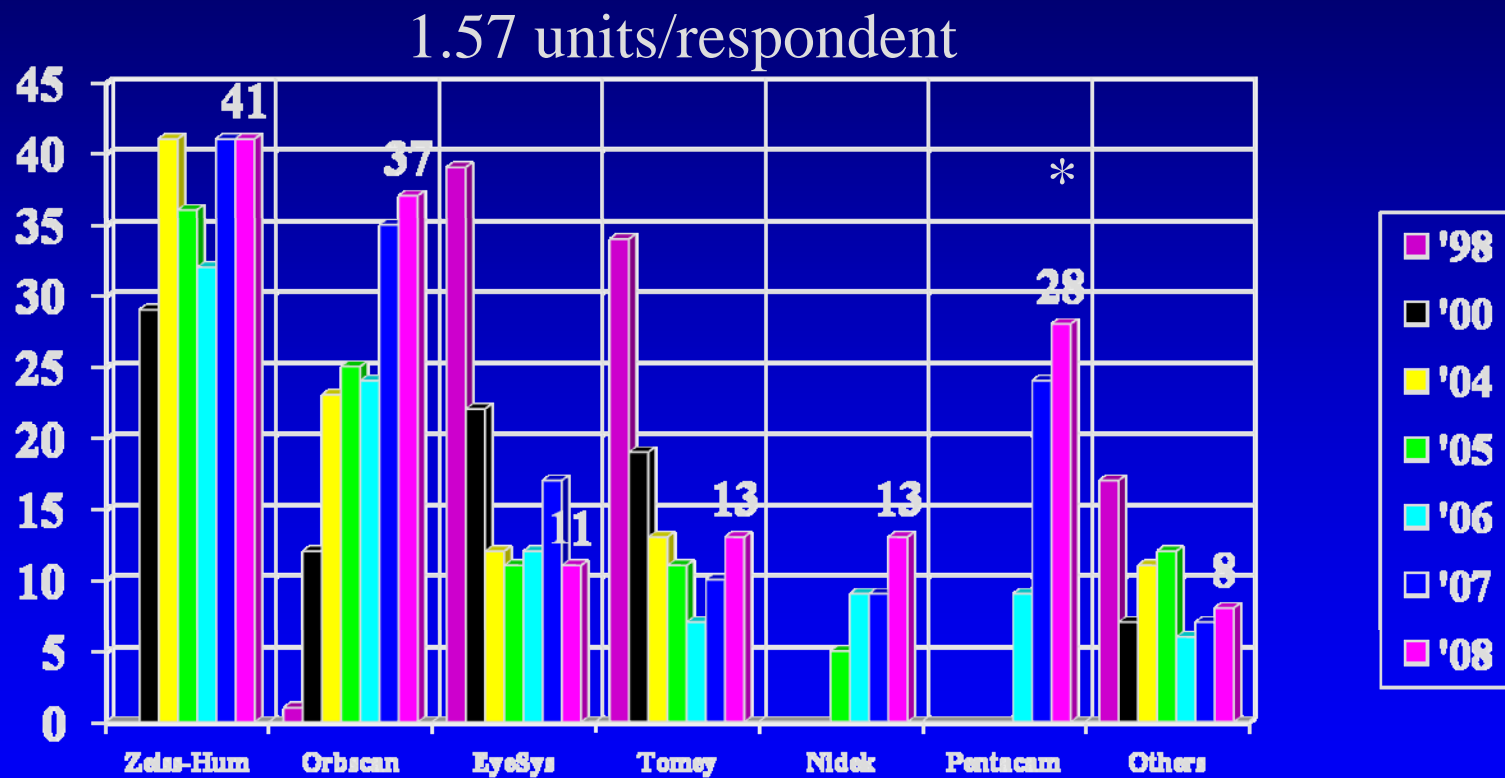


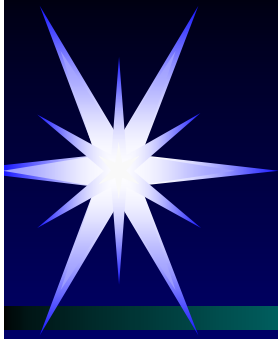
Microkeratome Most Commonly Used



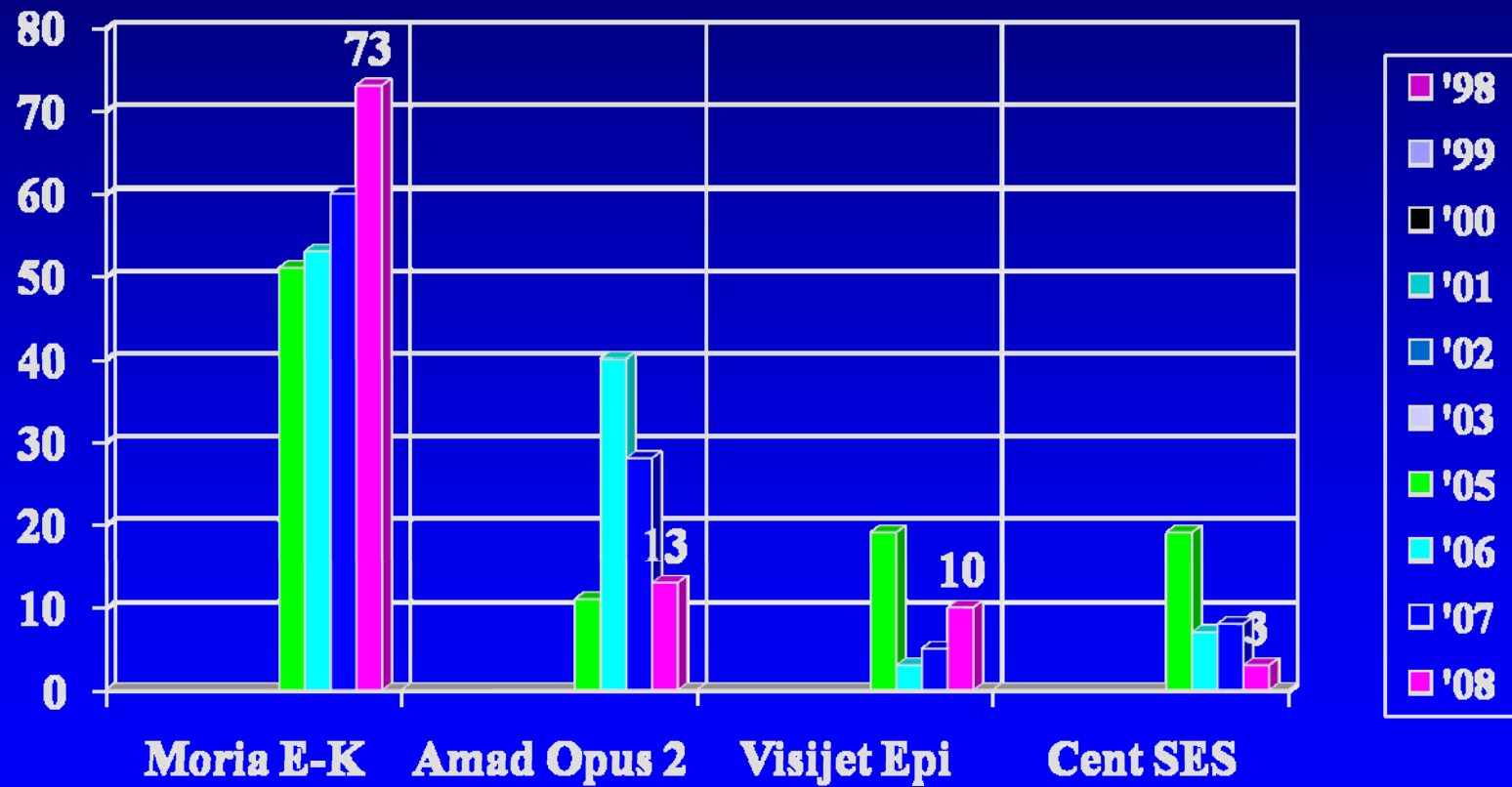


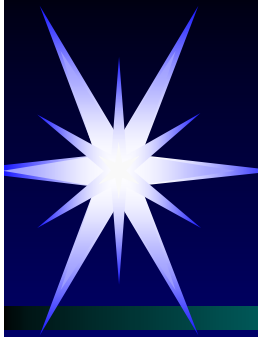
Topography Unit Most Commonly Used



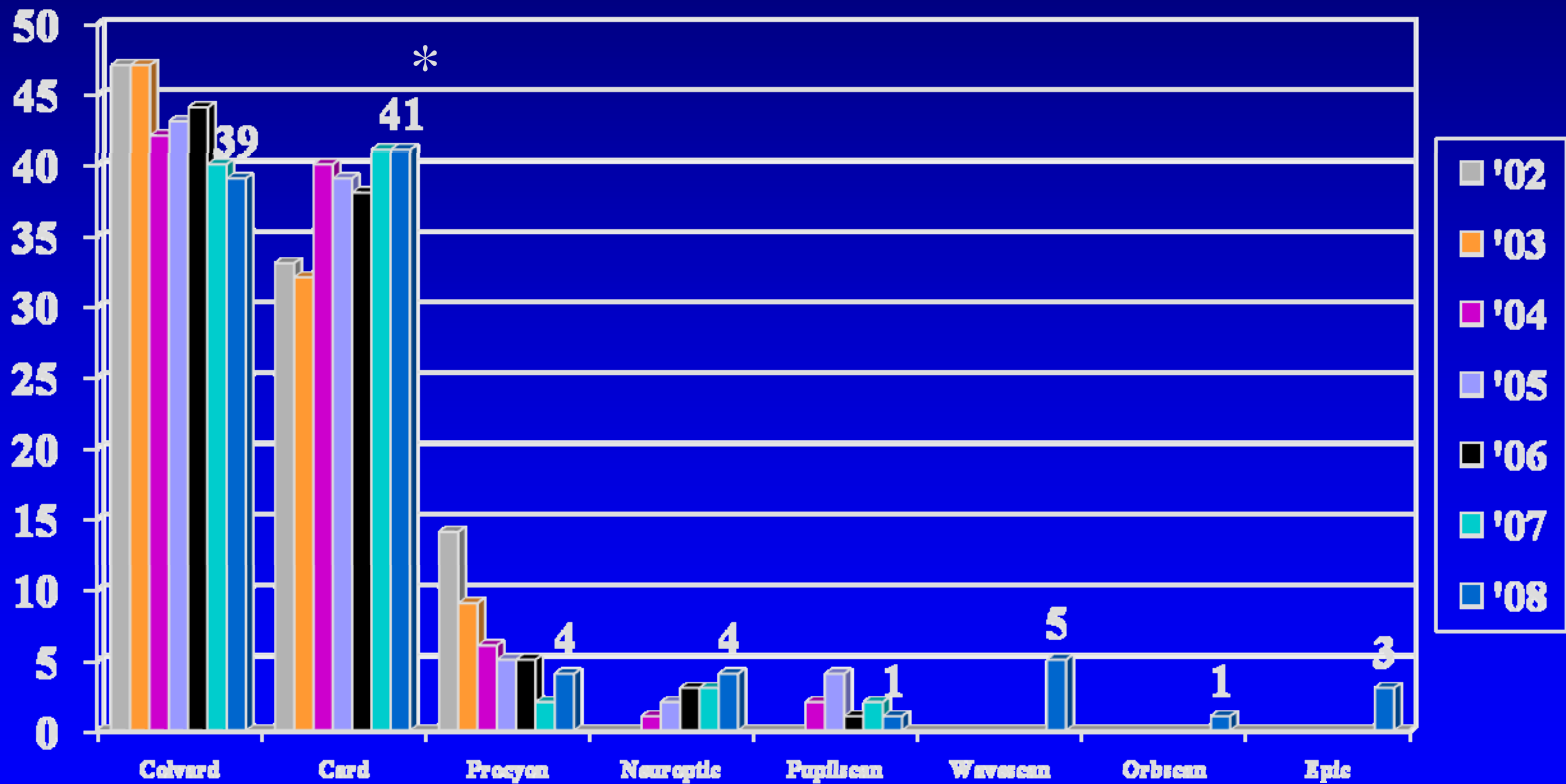


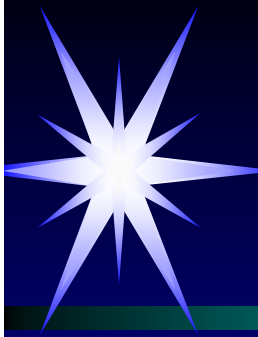
Epi-Keratome Use



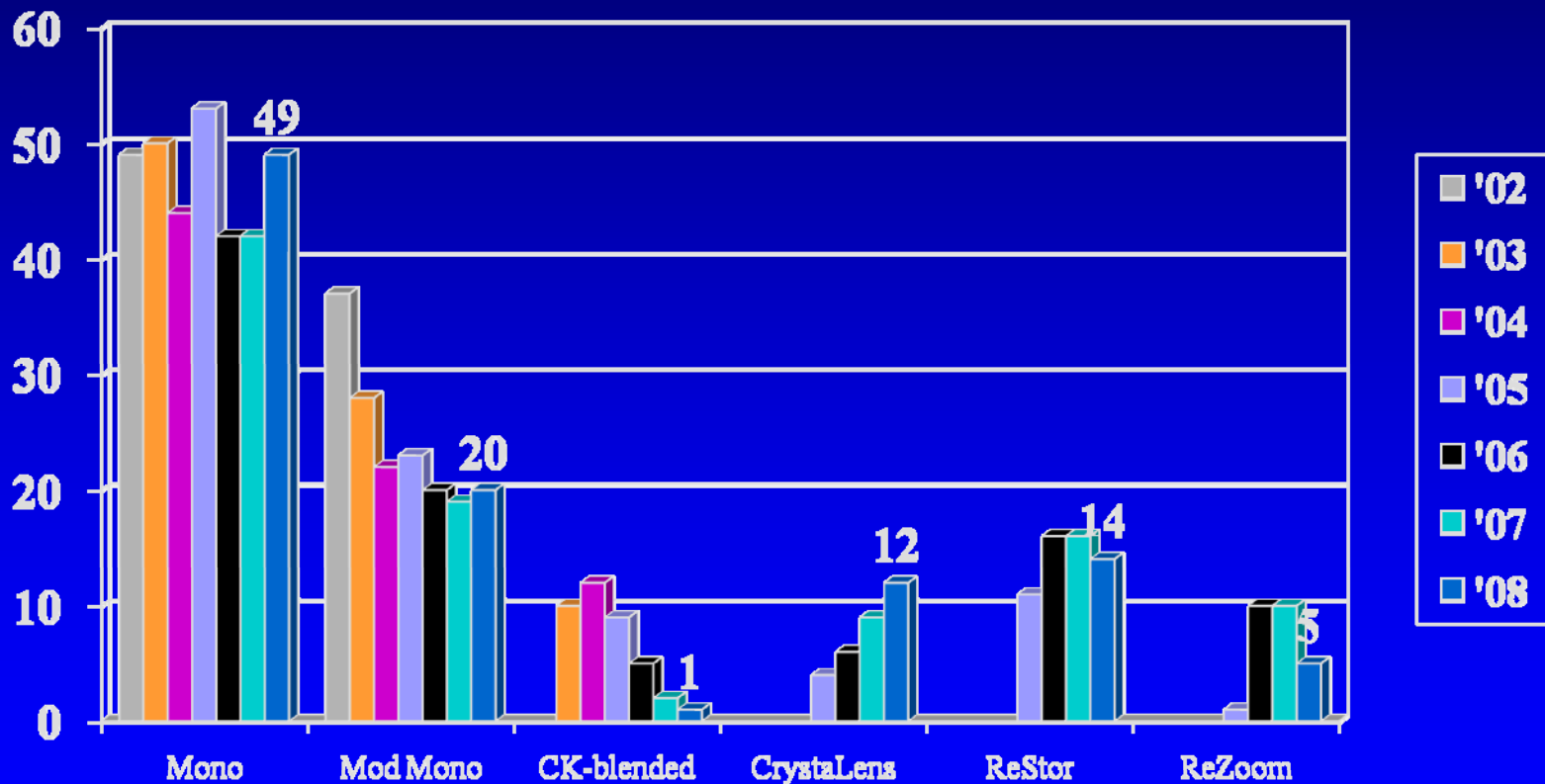


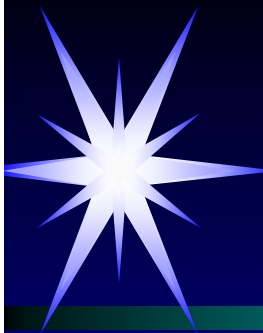
Pupil Gauge Instrument Use



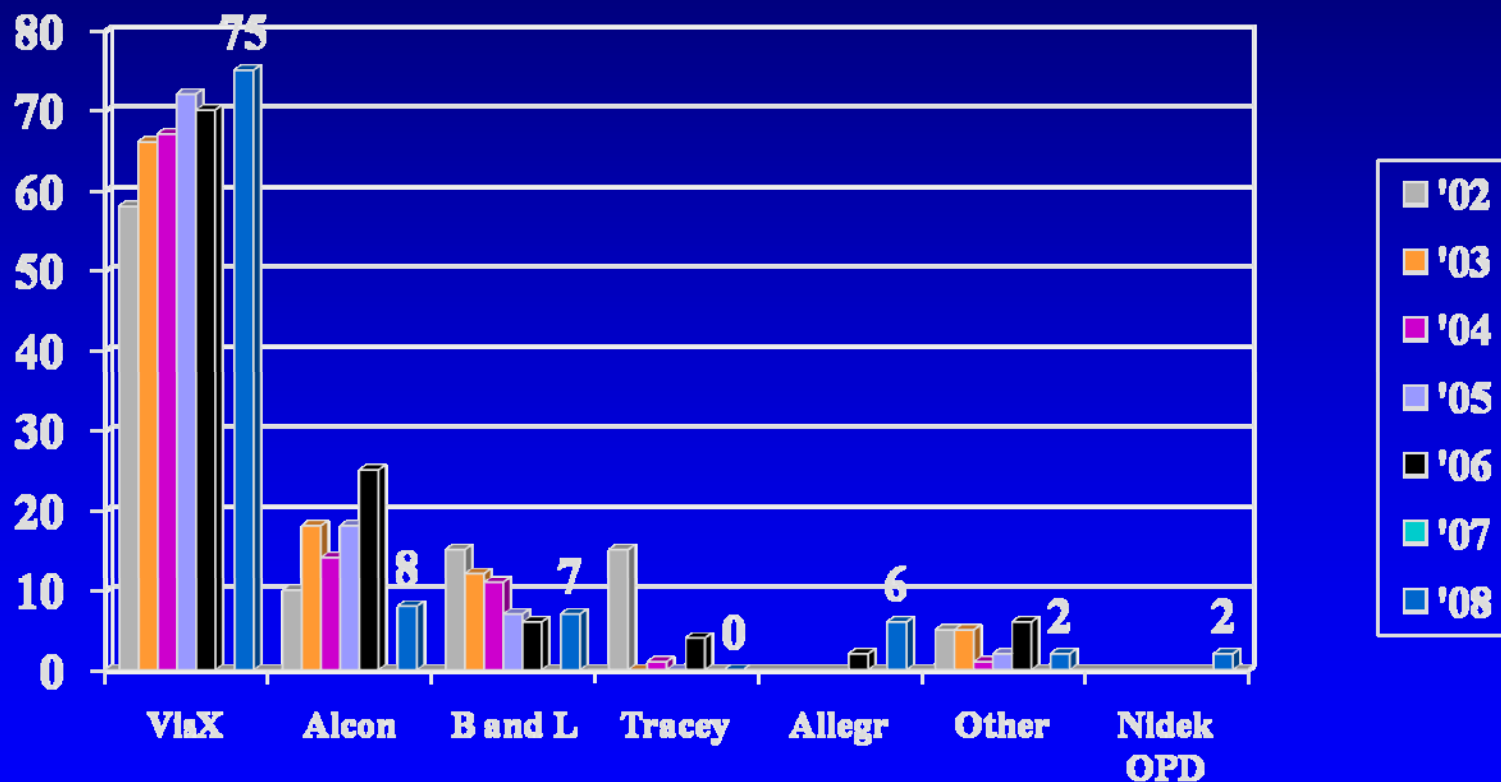


Preferred Surgery for Presbyopia



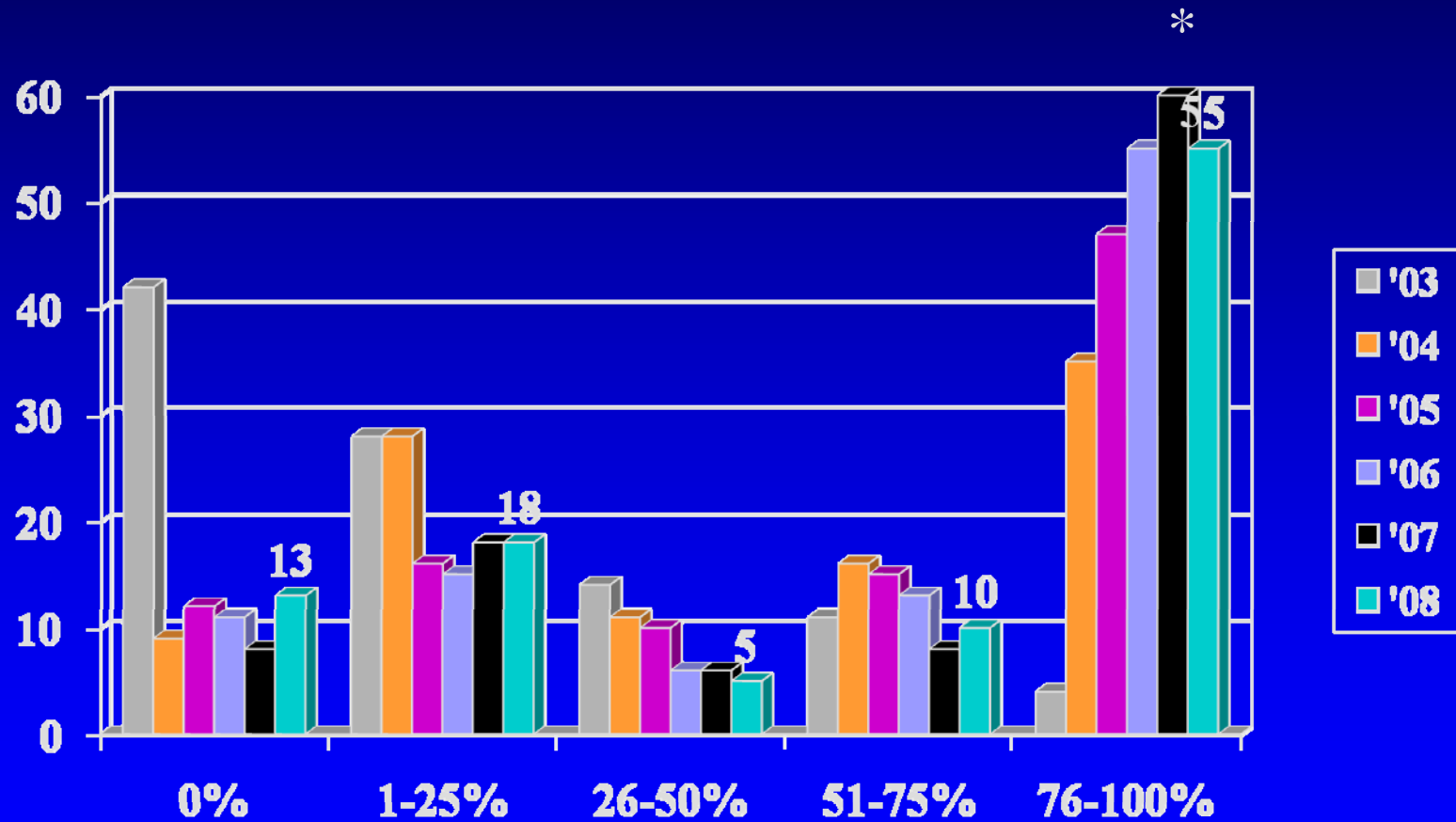


Wavefront Analyzer

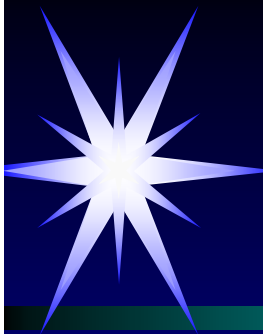




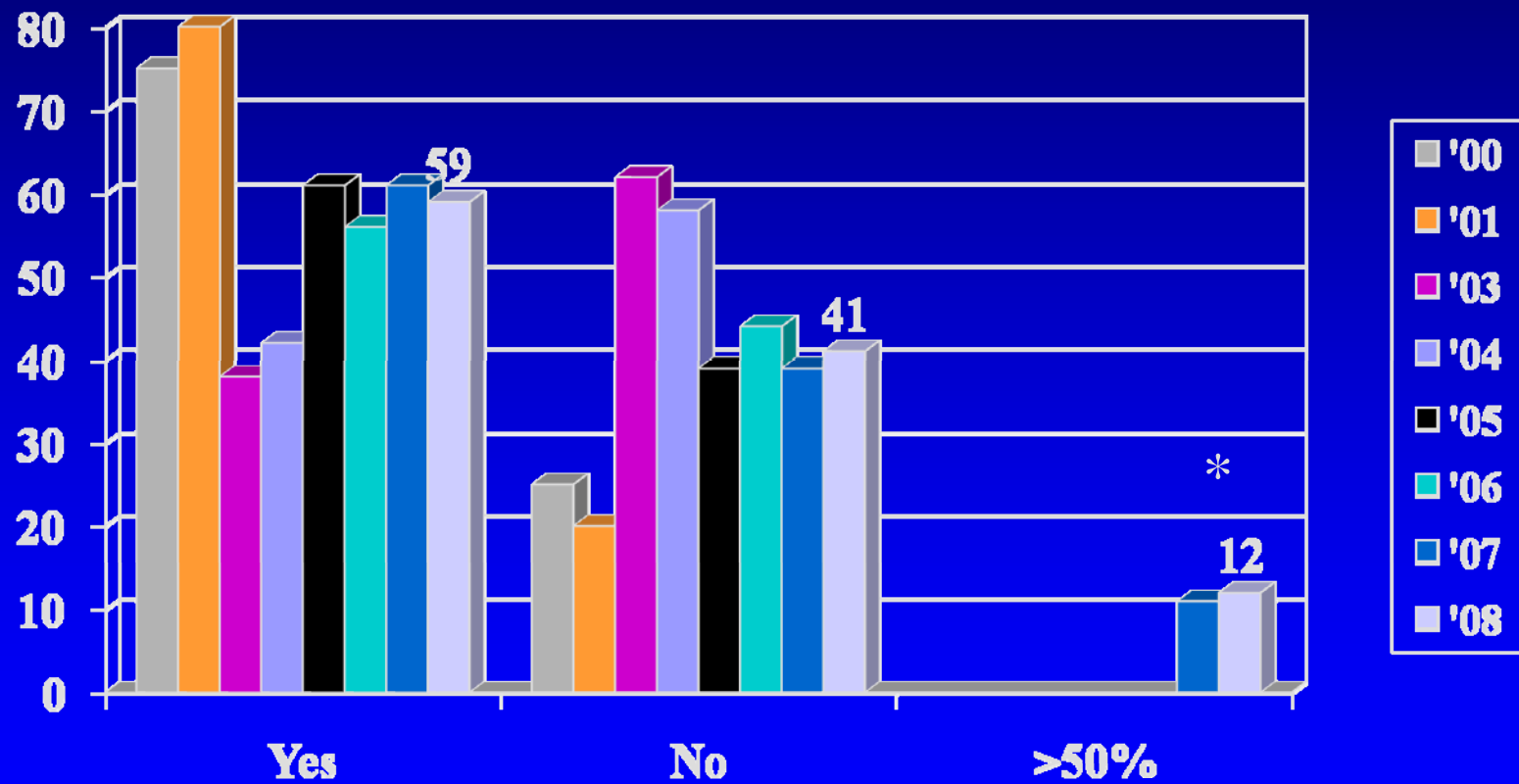
Wavefront-Guided Custom Ablations in Your Practice



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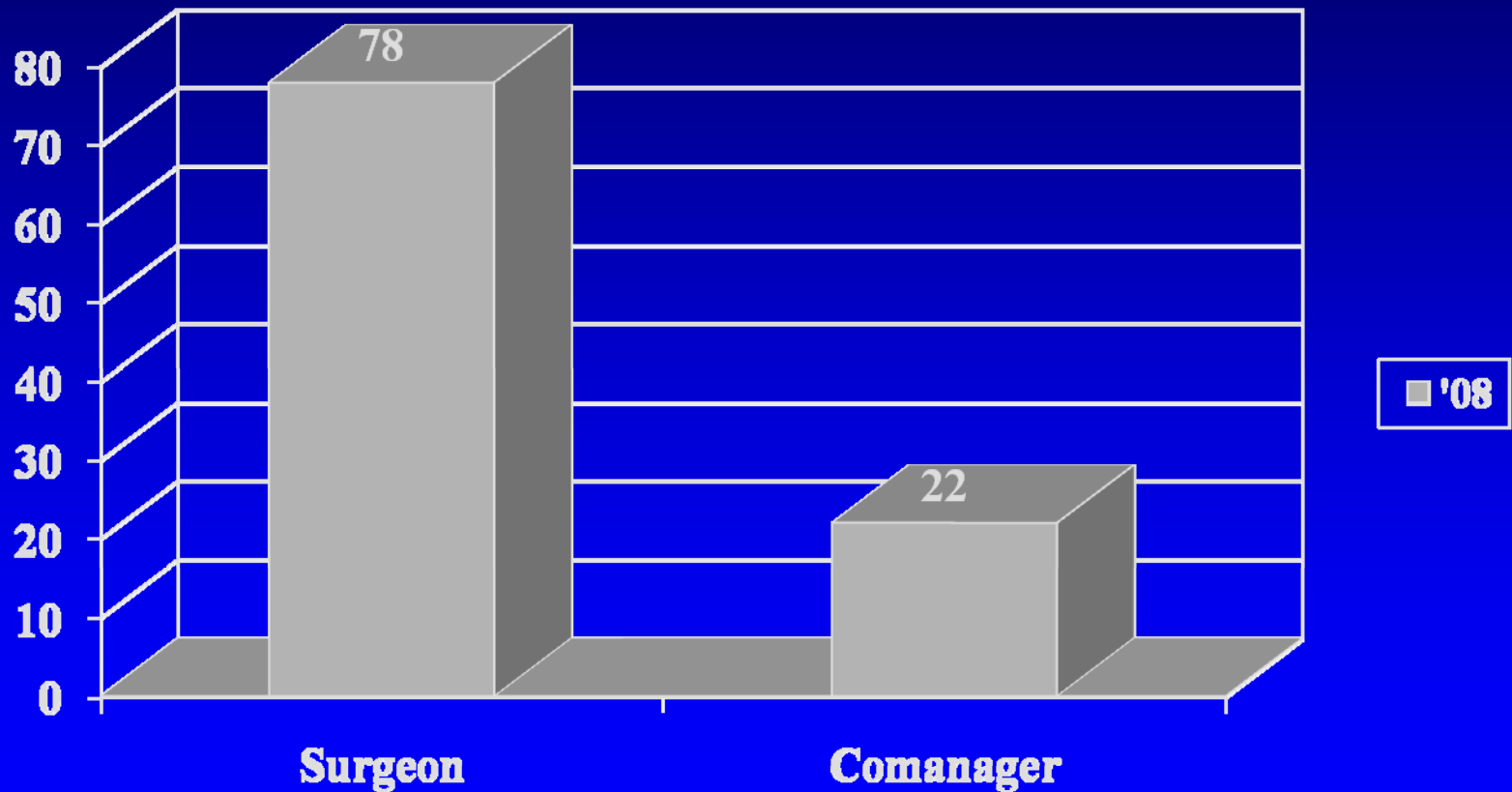


Comanagement



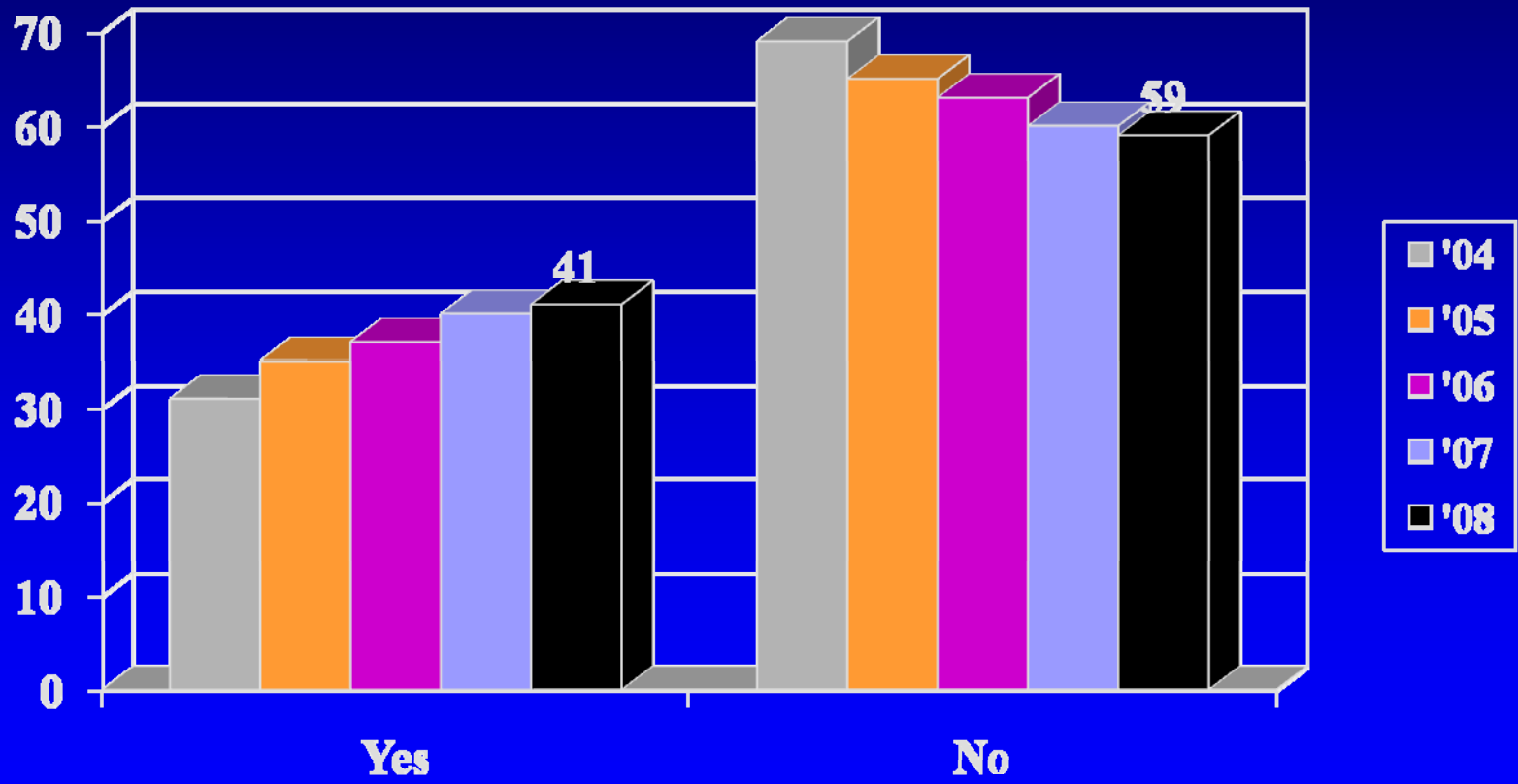


When comanaged, who does day 1 postop exam?



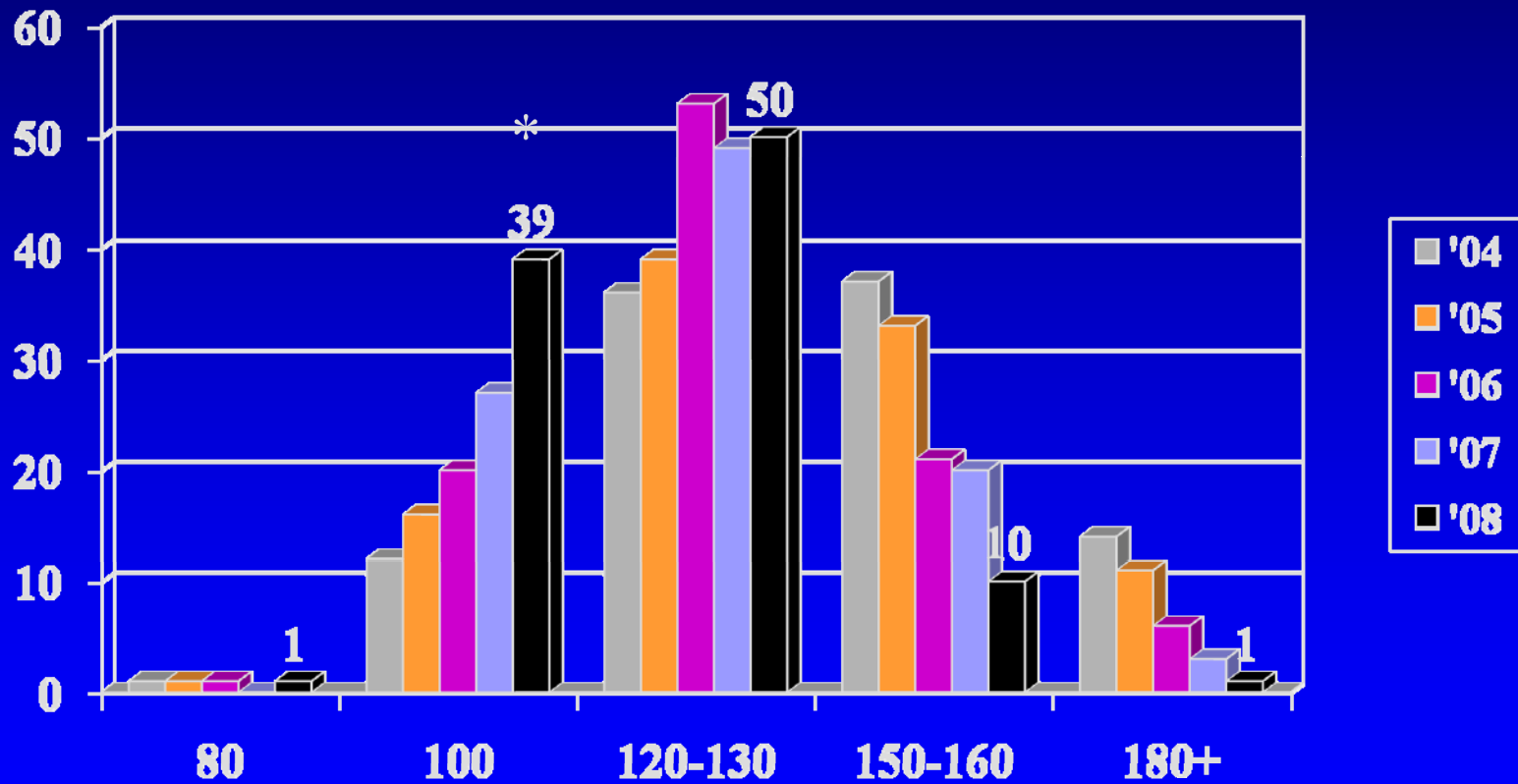


Do You Routinely Measure Flap Thickness *Intra-operatively* ?



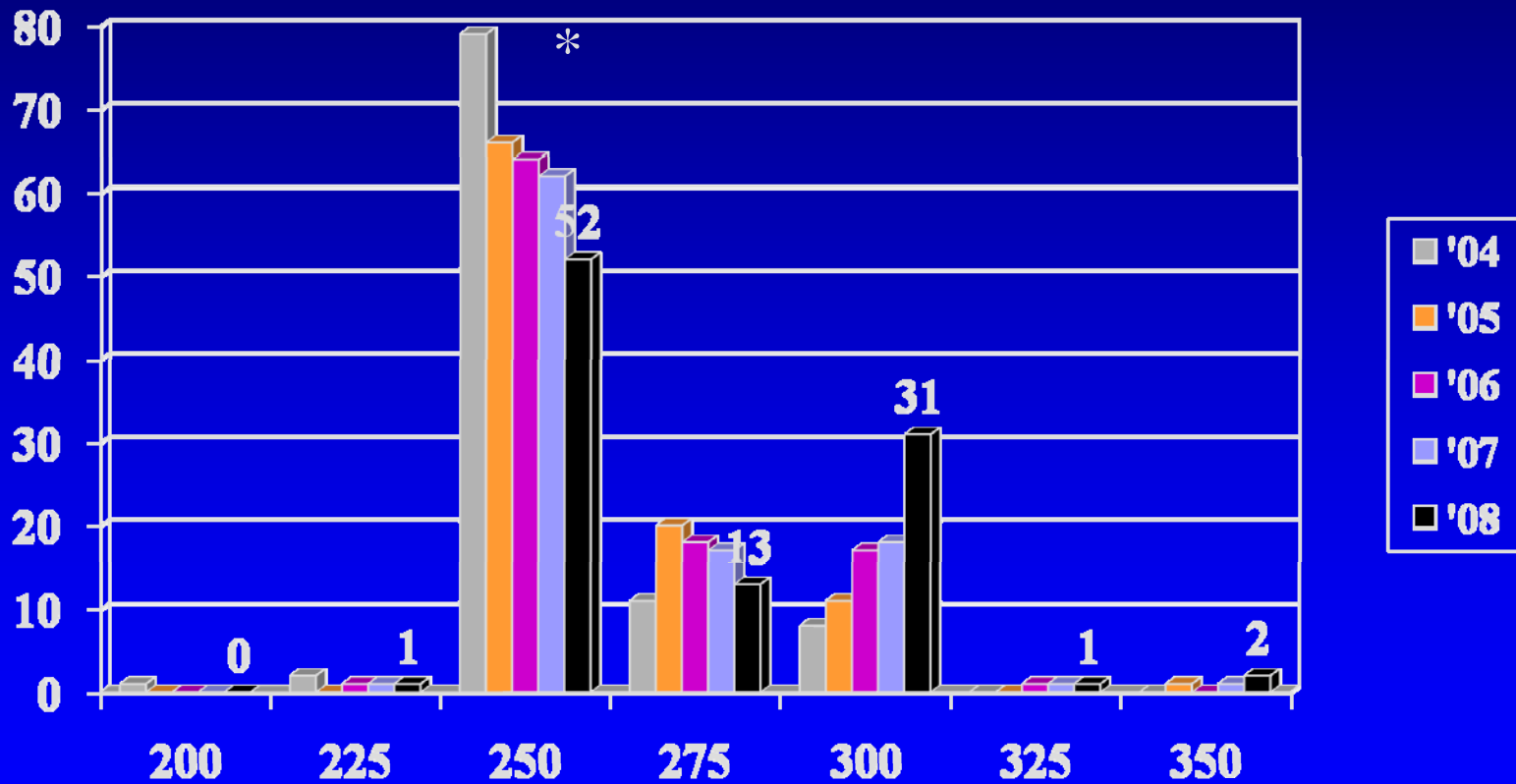


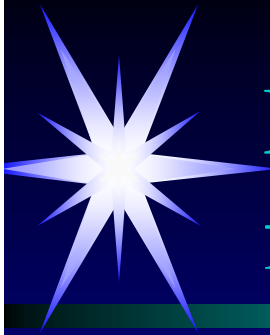
Preferred Flap Thickness (when no other constraints)



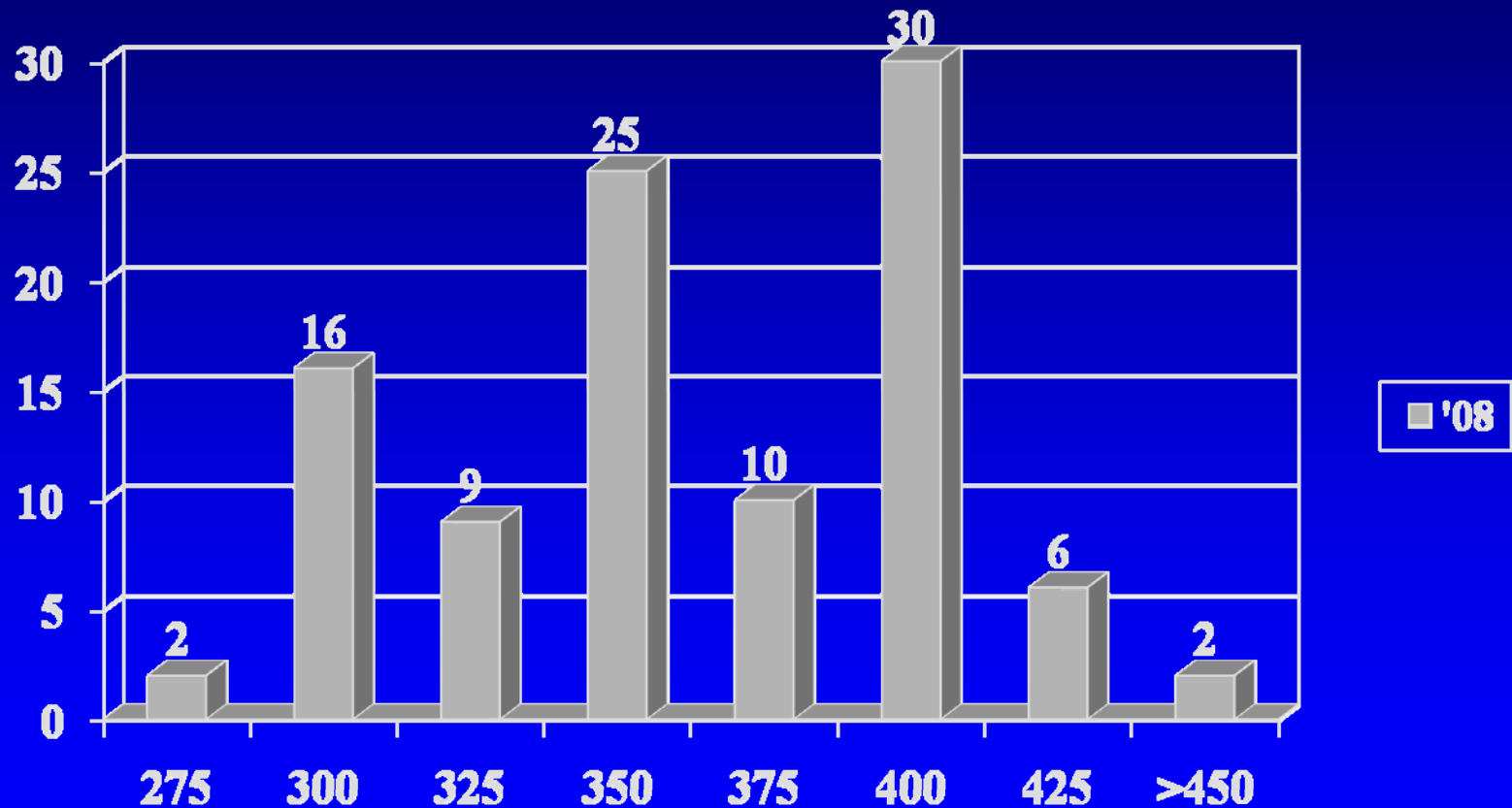


Minimum Residual Stromal Bed Thickness Requirement for LASIK





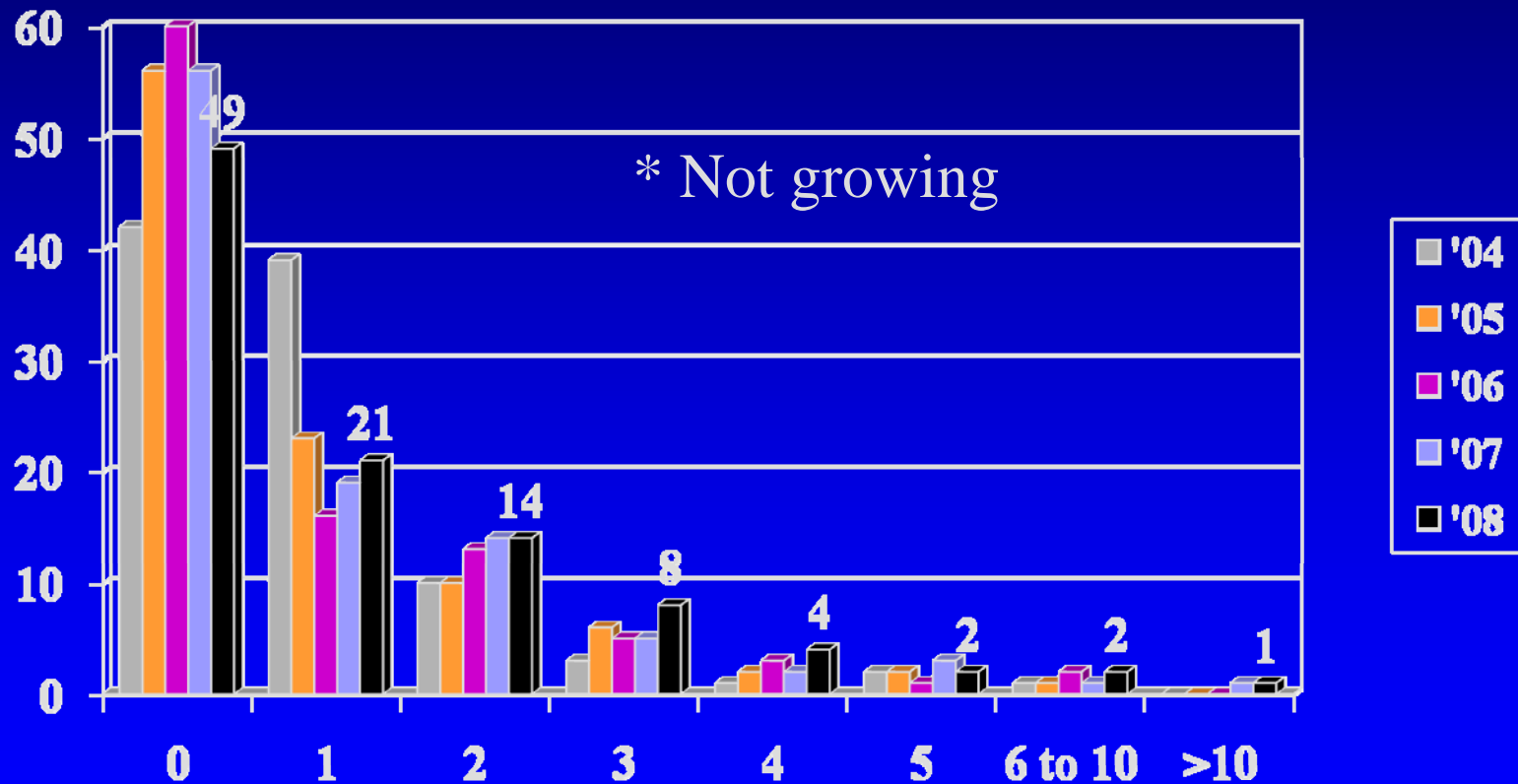
Minimum Residual Corneal Thickness for PRK (including epithelium thickness)

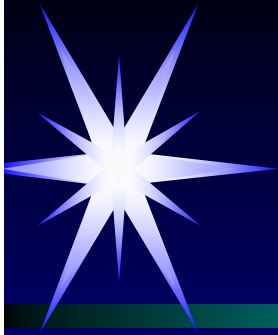


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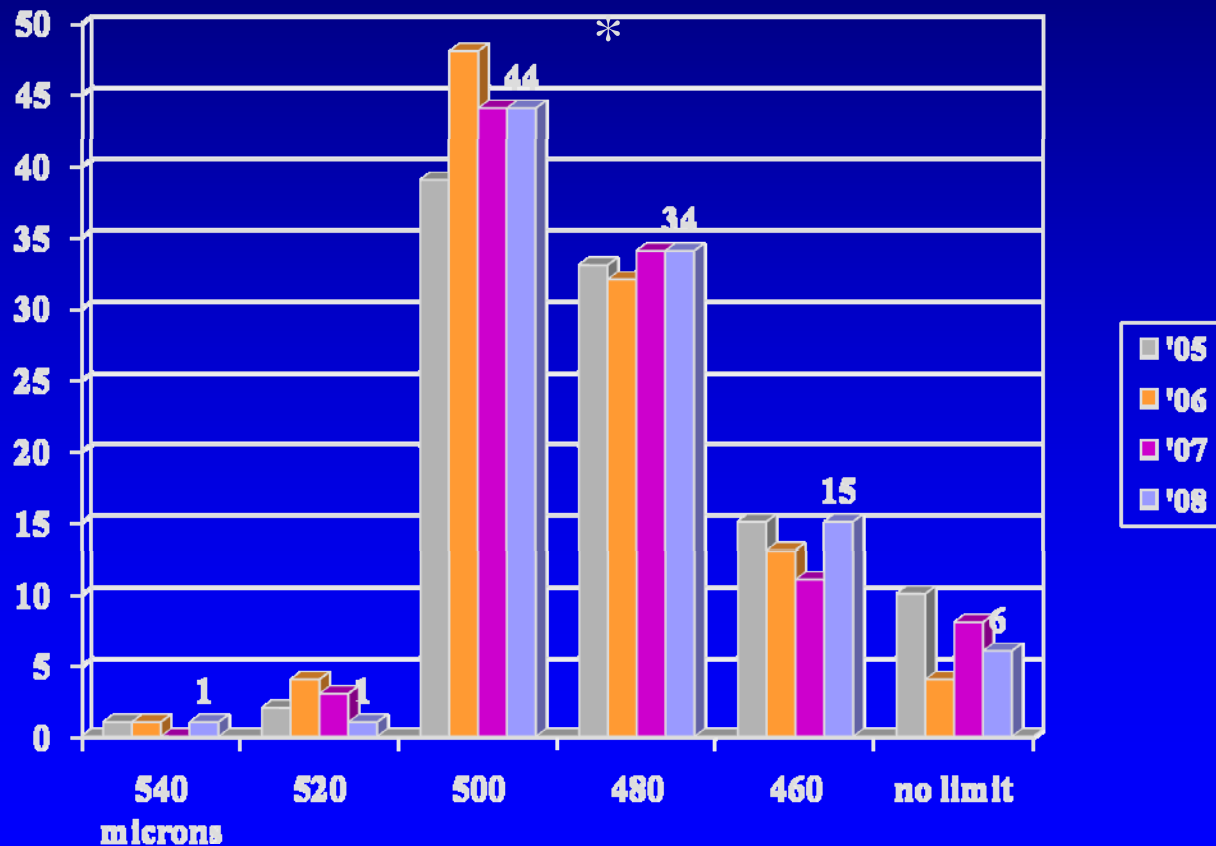


Total Cases of Post LASIK Ectasia as the Primary Surgeon in Career

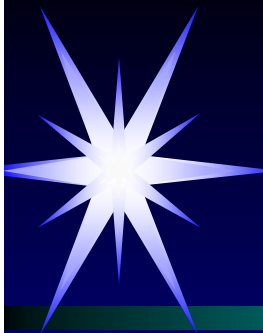




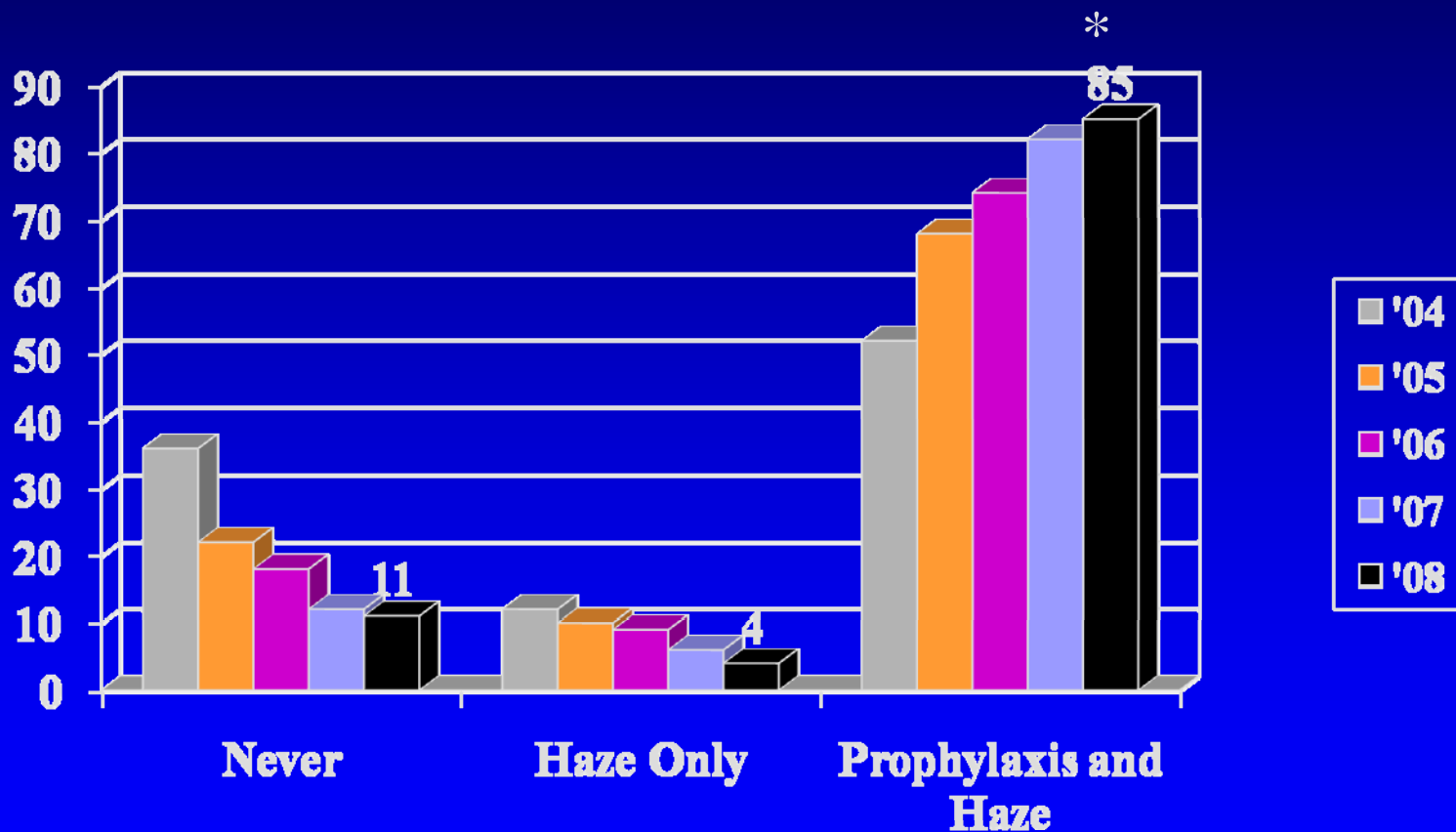
Minimum Cent. Corneal Pachymetry for LASIK (all other parameters normal)



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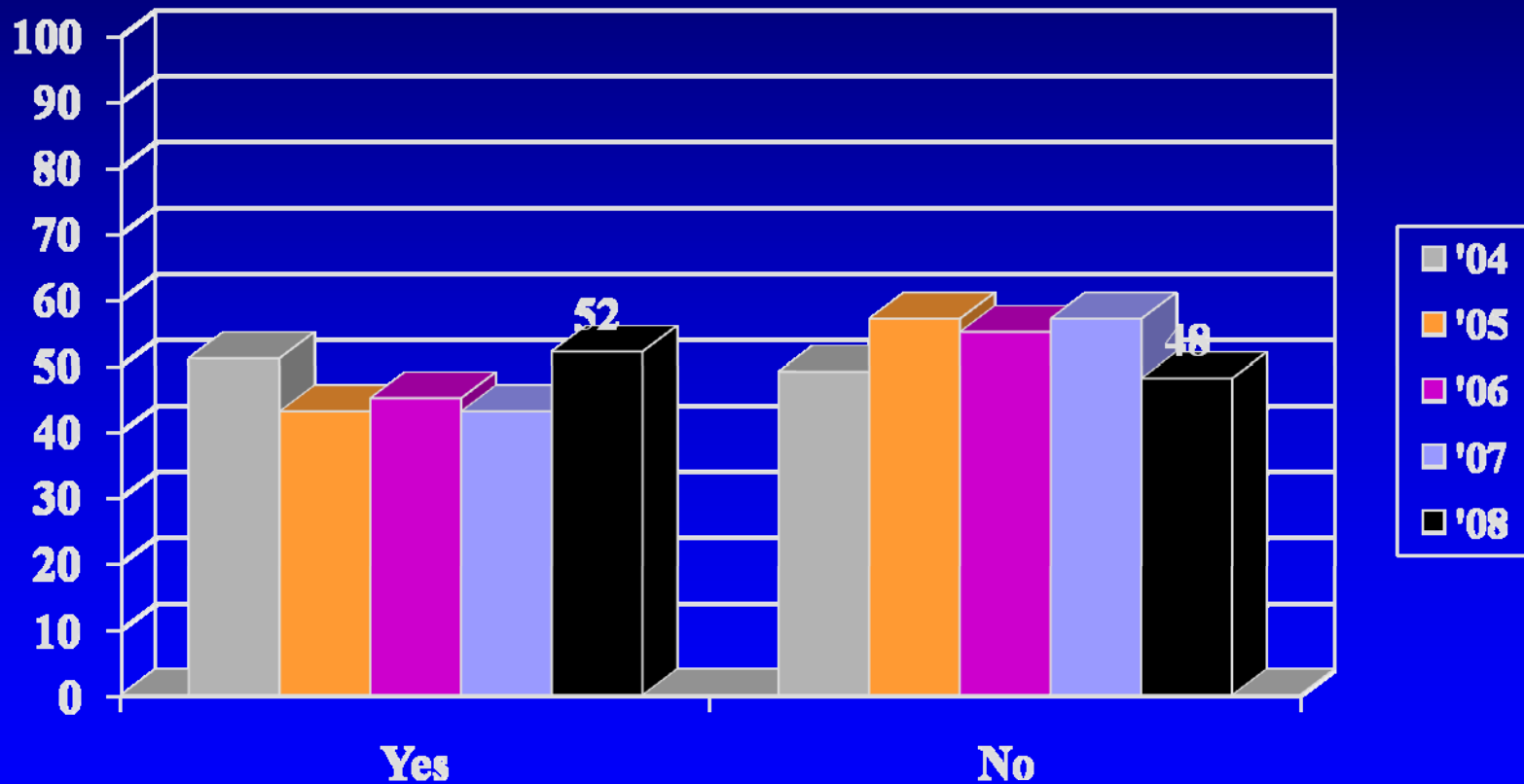


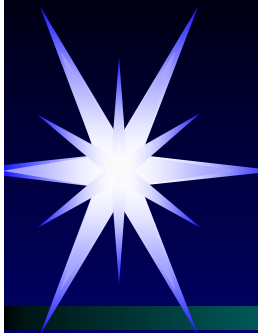
Mitomycin-C Use (MMC)



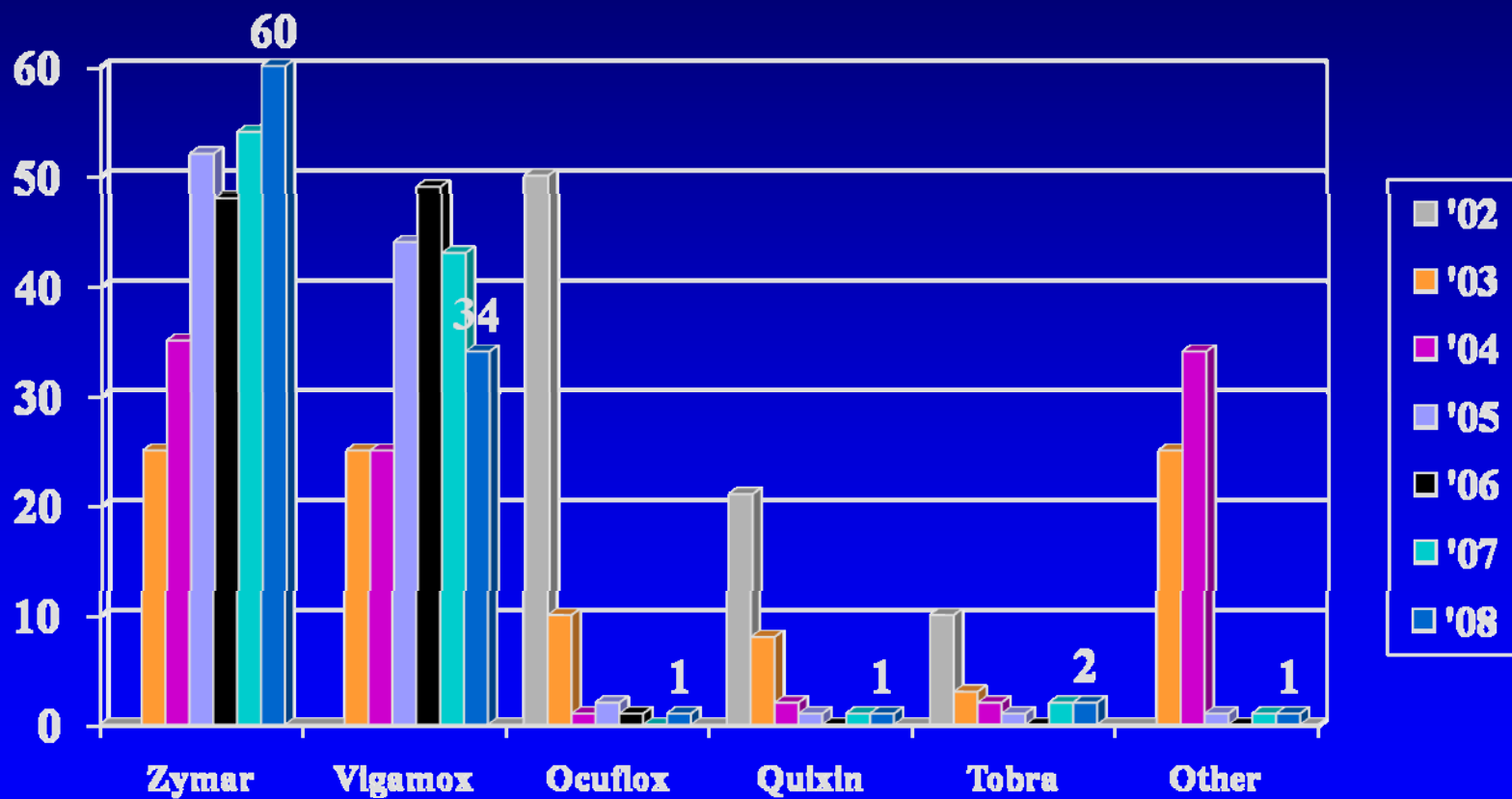


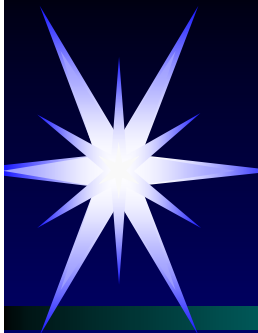
Will You Perform Refractive Surgery on One-Eyed Patients



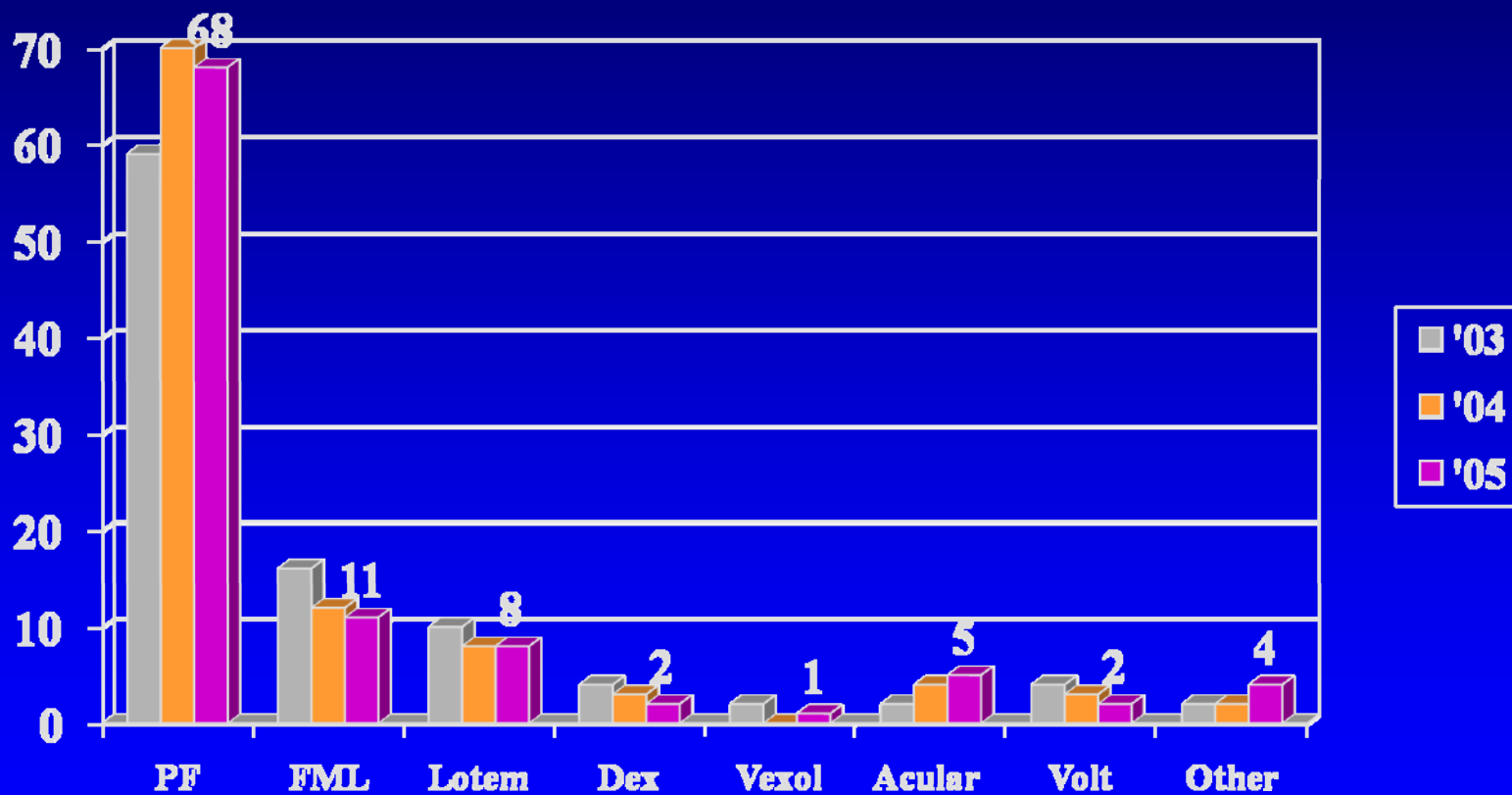


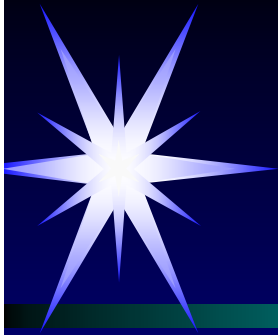
Post-Op Antibiotic



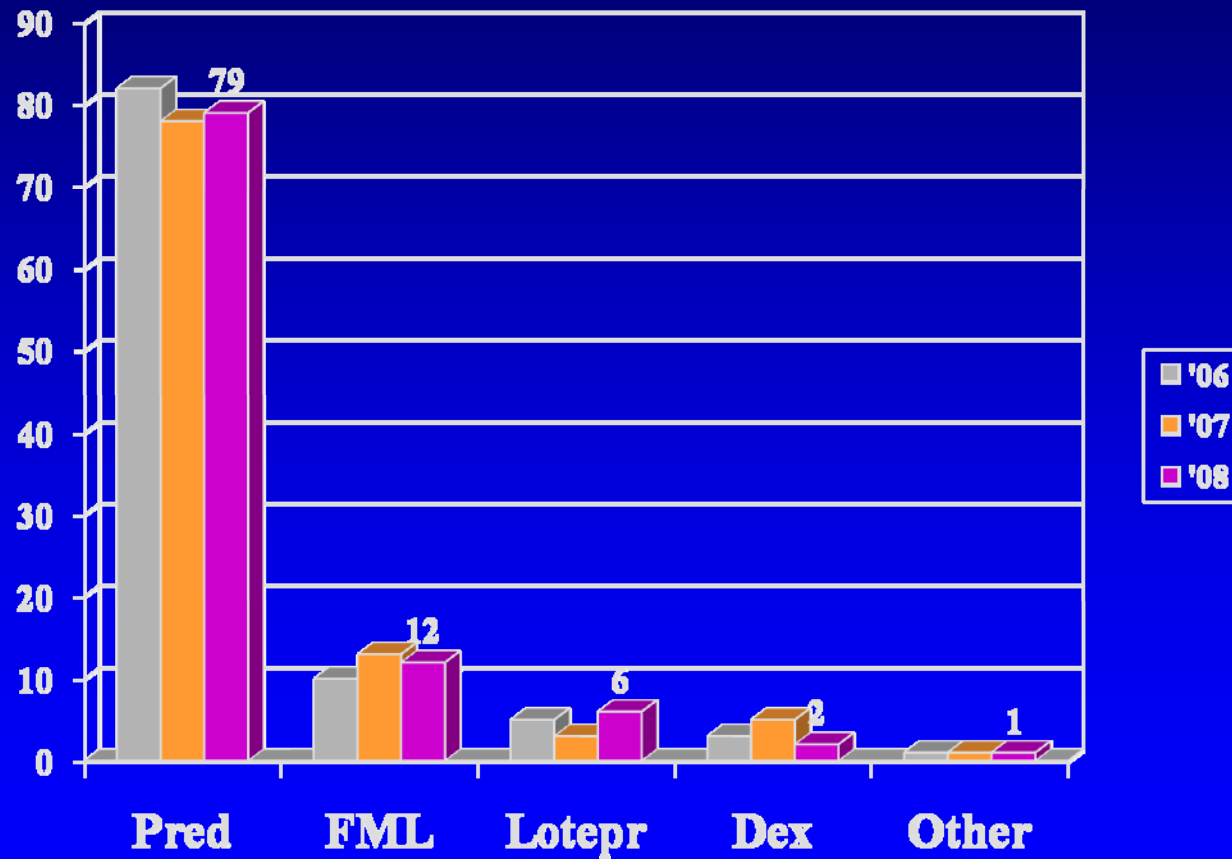


Post-Op Anti-inflammatory

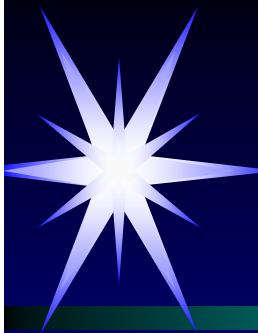




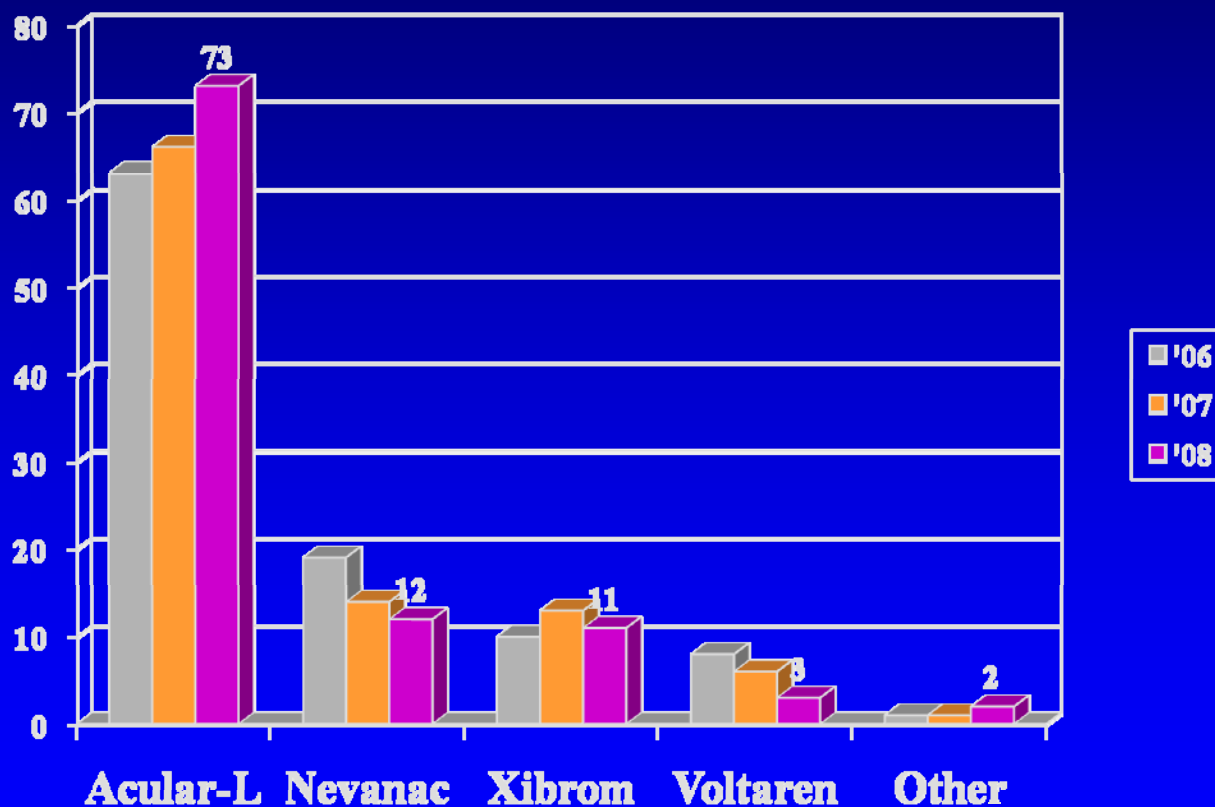
Post-Op Steroid

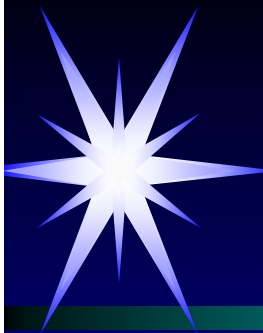


DUFFEY 2008

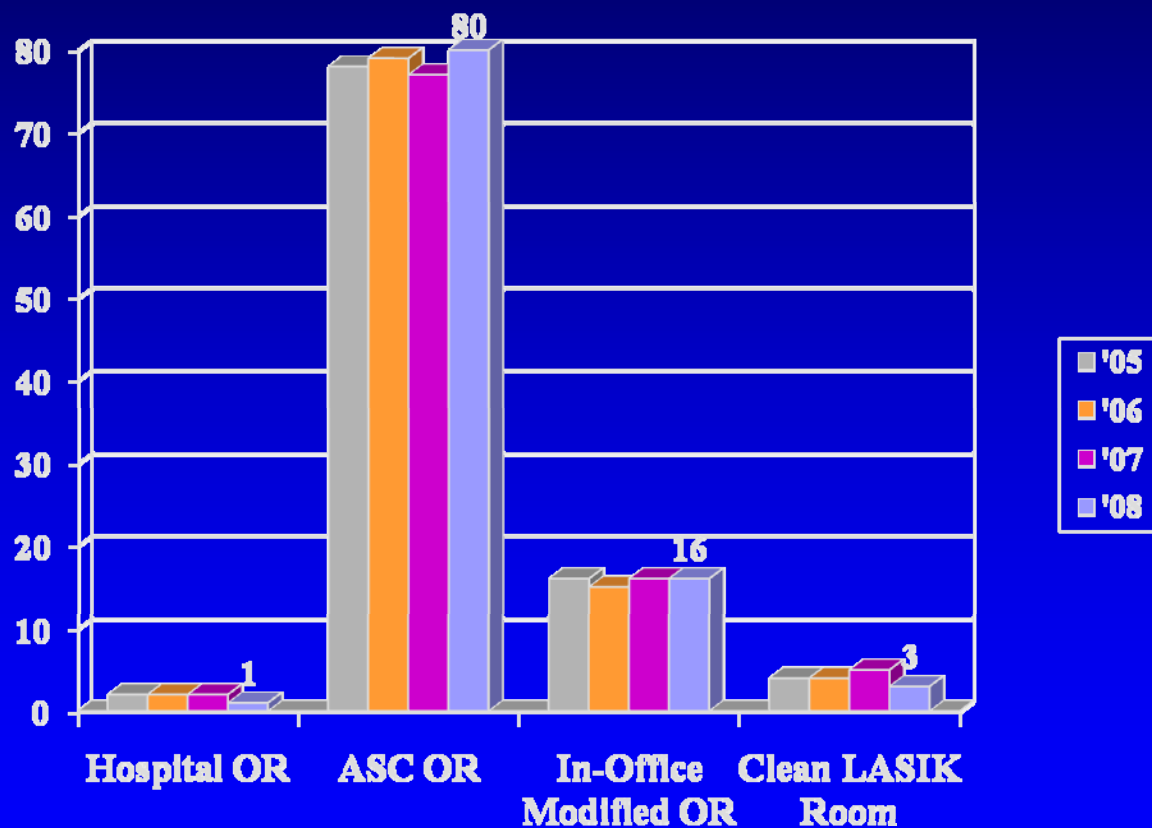


Post-Op Nonsteroidals





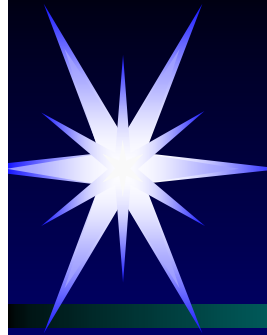
Location of Phakic-IOL Surgery





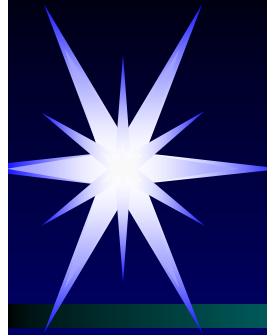
'08 ISRS/AAO Survey Conclusions

- LASIK dominates between -8D and +3D.
- P-IOL (46%) for -10D myopes (28% choose LASIK here).
- RLE for high hyperopes (62%).
- Trend is toward thinner flaps (mechanical or laser) in LASIK (40% for 100 microns or less).



Conclusions continued...

- VisX still at $> 2:1$ over all other lasers.
- Intralase now dominates market share (40%).
- Over 90% perform custom ablations...and 55% of refractive surgeons whenever possible).



Conclusions continued...

- Comanagement stable at 59% ; only 12% comanage more their half their patients.
- Over one-third of us (35%) have had modern refractive surgery done on our own eyes!
- Families of refractive surgeons are having refractive surgery on their own eyes (32% of spouses, 21% of children, and 40% of siblings) at a rate far out-pacing the general population.



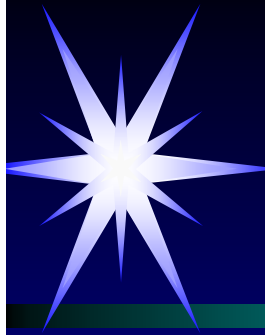
Conclusions continued...

- 41% of refractive surgeons now measuring true flap thickness in the OR.
- About half of surgeons surveyed (51%) have had a documented case of post-LASIK ectasia in his/her surgical patients over a career, and the number of new cases has continued to slow significantly.
- 52% think 250 microns is adequate for RSBT after LASIK. 47% recommend 275 microns or more.
- Trend is toward thinner flaps (between 100-125).



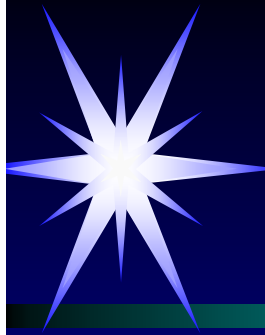
Conclusions continued...

- 89% use MMC for prophylaxis and/or haze (continues to increase).
- 52% OK with refractive surgery on one-eyed patients.
- Bilateral extraocular sx at same O.R. visit is SOC.
- 17% of respondents OK with bilateral P-IOL at the same surgical setting (4% with RLE).
- ASC OR is preferred location for P-IOL surgery (80%). 16% OK with “In Office” modified OR.



2008 ISRS/AAO SUMMARY

- **P-IOL (46%) and LASIK (28%) in high myopes.**
- **VisX still > 2:1 (67%) over all other lasers; Wavelight on the rise (18%).**
- **Wavefront custom ablations are stable with >90% of surgeons performing them (55% whenever possible).**
- **35% penetration of modern refractive surgery amongst refractive surgeons; 4 times the general population. Even greater Family Index rates.**



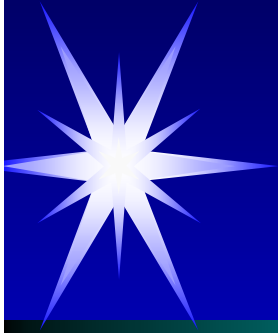
2008 ISRS/AAO SUMMARY

- **MMC use continues to rise (89%).**
- **17% of respondents are OK with bilateral P-IOL and 4% with bilateral RLE at the same surgical setting.**
- **ReStor (14%) and Crystalens IOL (12%) outpaced the ReZoom (5%) IOL's for preferred lens-based presbyopia option.**
- **Femtosecond laser leads the marketplace at 40%.**



2008 ISRS/AAO SUMMARY

- **Thinner flaps on the rise;** 100 micron or less flap thickness is favored by **40%** of surgeons (up from 12% in '04).
- **RSB Thickness on the rise;** 52% still think 250 microns is adequate, but 47% recommend 275 microns or more.
- **New post-LASIK ectasia cases are on the decline.**



Thanks to the ISRS/AAO
leadership for their support and
for *your* participation in the
2008 Survey

We look forward to your response to
the 2009 survey next fall

Complete results at
www.duffeylaser.com